DOCUMENT RESUME

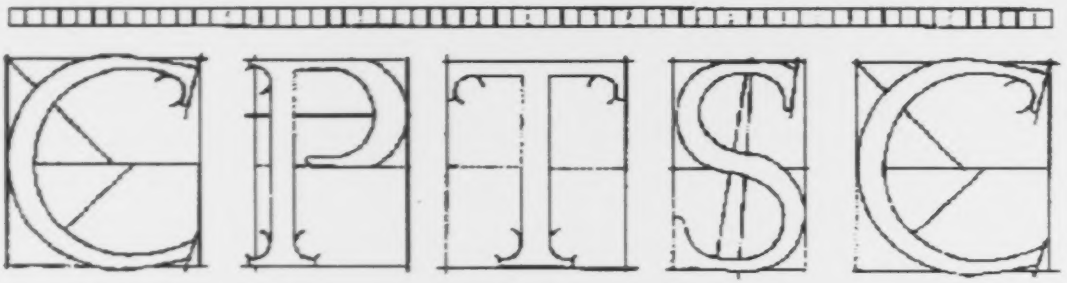
ED 425 477 CS 509 932

TITLE	Proceedings of the Annual Meeting of the Council for Programs in Technical and Scientific Communication (24th, Austin, Texas, October 16-18, 1997).
INSTITUTION	Council for Programs in Technical and Scientific Communication.
SPONS AGENCY	New Mexico Inst. of Mining and Technology, Socorro.
PUB DATE	1998-03-00
NOTE	156p.
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	*Distance Education; *Ethics; Global Approach; Higher Education; Legal Problems; Literacy; *Professional Development; *School Business Relationship; School Community Relationship; Scientific and Technical Information; *Technical Writing; *Theory Practice Relationship

ABSTRACT

Based on the theme of connections in technical and scientific communication, this proceedings presents 47 papers delivered at the 1997 annual meeting of the Council for Programs in Technical and Scientific Communication (CPTSC). Papers in the proceedings are divided into 10 sections: (1) Theoretical Connections; (2) Legal and Ethical Connections; (3) Professional Development Connections; (4) Literacy and Technology Connections; (5) Industry Connections; (6) Curricular Connections; (7) Distance Learning Connections; (8) Disciplinary Connections; (9) Community Connections; and (10) International Connections. Papers in the proceedings include: "Why Do We Have to Read This Boring Stuff?: Theory as the Connection between School and the Real World" (Marilyn Cooper); "Composition and Technical Communication: Seeking the Theoretical Connections" (Carole Yee); "Who Owns a Web Site? An Initial Discussion of Intellectual Property Rights in Technical Writing Projects" (Daniel G. Riordan); "How Can We Treat Ethics Issues Ethically in Technical Communications Programs?" (Nancy Allen); "What Should Technical Communication Educators Know about Professionalization?" (Gerald Savage); "Tools for Scholars and Other Knowledge Workers: Connecting Computer Technology to the Curriculum" (Pamela S. Ecker); "Hiring Those Who Can and Do Teach: The Faculty Connection to Workplace Practices" (Louise Rehling); "Adding Value to the Technical Communication Program: The Need for Required Research Methodology Courses" (Elizabeth Pass); "Service Courses Don't Have to Be Servants Anymore: The Role of Environmental Communication in the Technical Communication Classroom" (Hillary Hart); "Examining the Culture of Distance Education: Ideologies and Technologies" (Ann Hill Duin and James Frost); "How to Make Distance Education Work: Planning Ahead and Getting It Right the First Time" (Kelli Cargile Cook); "Cross Talk: Technical Communication and Technical Curricula" (Diane Atkinson and Betsy Aller); "Building a Graduate Certificate Program: Making Connections with the Community-at-Large" (Deborah S. Bosley); "Integrating Image Restoration Rhetoric into Professional Writing Courses" (Gwendolyn Gong); and "Restructuring Our Undergraduate Programs: Internationalizing Our Curricula" (Herb Smith). Appendixes contain a list of conferees; a list of annual meetings, sites, and dates; a list of previously published CPTSC documents; and lists of CPTSC officers and members. (RS)

ED 425 477



The Council for Programs In Technical and Scientific Communication

Proceedings
1997

Austin, Texas

CS 509932

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Preparation of these *Proceedings* is supported by New Mexico Institute of Mining and Technology.

Proceedings

The Council for Programs in Technical and Scientific Communication

24th Annual Conference

Austin, Texas
October 16-18, 1997

Editor: Carole Yee
Designer: Bruce Amos

The papers in these proceedings were reproduced from originals provided by the authors. The opinions in these papers are the responsibility of the authors, not the Council for Programs in Technical and Scientific Communication.

Any papers may be reproduced without permission of the Council for Programs in Technical and Scientific Communication, if the author and the council are credited appropriately.

These Proceedings are published by the Council for Programs in Technical and Scientific Communication at New Mexico Institute of Mining and Technology.

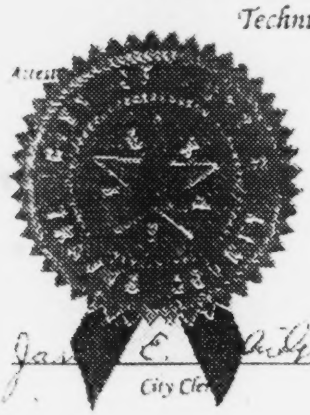
City of Austin

Proclamation

Be it known by these presents that
I, Kirk Watson, Mayor of the City of Austin, Texas,
do hereby proclaim
October 16 - 18, 1997
as

Council of Programs in Technical and Scientific Communication Days

in Austin, and call on all citizens to join me in recognizing the Council of Programs in Technical and Scientific Communication as an organization with the goal of promoting advances in communication, technological developments, and industry partnerships, in recognizing the theme of the 1997 Conference as programmatic connections which can support technical communication both now and in the future, and in welcoming to Austin everyone attending the 24th Annual Conference of the Council of Programs in Technical and Scientific Communication.



Mayor
Kirk Watson

City Cle

BEST COPY AVAILABLE

Contents

Program of the 24th Annual Meeting vi

Keynote Abstract
Lester Faigley 1

Theoretical Connections
Why Do We Have to read This Boring Stuff?:
Theory as the Connection between School and the Real World
Marilyn Cooper 5

Crafting Artifacts, Crafting Cultures, Crafting Selves:
Historicizing Theory for Use in Technical and Scientific
Communication Curricula
Robert R. Johnson 9

Composition and Technical Communication:
Seeking the Theoretical Connections
Carole Yee 11

Theories in Technical Writing Programs? Not If But Which
Davida Charney 13

Do We Have a Theory of Contexts in Technical Communication?
M. Jimmie Killingsworth 15

Legal and Ethical Connections
Who Owns a Web Site? An Initial Discussion of Intellectual Property Rights
in Technical Writing Projects
Daniel G. Riordan 19

Can I Import This Web Page Into My Project? Connections Between
Technical Communication and Intellectual Property Concerns
Laura J. Gurak 23

Who Owns My Work? The Practical Side of the Work-For-Hire Doctrine
TyAnna K. Herrington 25

How Can We Treat Ethics Issues Ethically in Technical
Communications Programs?
Nancy Allen 26

When Worlds Collide: Corporate Problems Invade the Classroom
Ann S. Jennings 28

Professional Development Connections
Issues of Quality in Academic Programs
Mike Keene 32

What Should Technical Communication Educators Know About Professionalization?
Gerald Savage 34

Connections Among Programs, Students, and the Workplace
Glenn Broadhead 36

Literacy and Technology Connections
The Challenges and Promise of Technology-Rich Facilities: From Exploitation to Critical Practices
Dickie Selfe and Cynthia Selfe 48

Connecting Research in Technical and Scientific Communication through the Internet
Don Payne, Iowa State University 50

Tools for Scholars and Other Knowledge Workers: Connecting Computer Technology to the Curriculum
Pamela S. Ecker 51

Securing Employment by Navigating Cyberspace? Raising Questions for Technical Communication Programs
Tim Fountaine 52

Synthesizing Technical and Critical Literacies: A Curriculum for the Class of 2001
Craig Waddell and Dale Sullivan 54

Industry Connections
Hiring Those Who Can and Do *and* Teach: The Faculty Connection to Workplace Practices
Louise Rehling 58

Academic-Industry Advisory Boards in Technical Communication
Kenneth T. Rainey 60

University Programs Working in Collaboration with Professional Organizations
Christine Abbott 67

Industry Partnerships in Usability Testing
Carol Barnum 69

Connections in Technical and Scientific Communication with Workplace Environments: Beneficial Partnerships that Neither Side Can Ignore
Mohsen Mirshafiei 71

Curricular Connections

Adding Value to the Technical Communication Program: The Need for Required Research Methodology Courses
Elizabeth Pass 75

Can We Resolve the Visual Analysis Dilemma in Document Design Curricula?
Brian Pedell 76

The Connection of Risk Communication, Technical Communication, and Civic Discourse: Programmatic Problems and Possibilities
Jeffrey T. Grabill 77

Service Courses Don't Have to be Servants Anymore: The Role of Environmental Communication in the Technical Communication Classroom
Hillary Hart 79

Some Rhetorical Comparisons of Technical and Scientific Communication
Elizabeth R. Turpin 81

Distance Learning Connections

Examining the Culture of Distance Education: Ideologies and Technologies
Ann Hill Duin and James Frost 85

The Impact of Distance Learning on Technical Communication Programs
Patricia Goubil-Gambrell 86

How to Make Distance Education Work: Planning Ahead and Getting It Right the First Time
Kelli Cargile Cook 87

Failure to Connect: Collaboration and Distance Learning in Scientific and Technical Communication Programs
Amy Hanson 89

Delivering On-line Degree Programs: Connecting Graduate Technical Communication Programs to Practitioners in the Work Place
Nancy M. O'Rourke 90

Disciplinary Connections

Cross Talk: Technical Communication and Technical Curricula
Diane Atkinson and Betsy Aller 94

A Simulation of the Discipline(s): Undergraduate Technical and Scientific Writing Programs
Ed Nagelhout 96

Making Interdisciplinary Connections: A Small Technical Writing Program Struggles to Survive
Celia Patterson 97

Connecting Technical Writing to Creative Writing and Beyond 98
Bruce Maylath

A Rationale for Including Creativity Training in Technical Communication Programs
Henrietta Nickels Shirk 100

Community Connections

The Public and Our Programs: Recontextualizing the Public Sphere in Technical and Scientific Communication
Angela Petit 105

Thinking about our Connections (and obligations) to the Public Sphere
Karen Rossi Schnakenberg 107

Building a Graduate Certificate Program: Making Connections With the Community-at-Large
Deborah S. Bosley 108

For a Service-Learning Pedagogy in Professional and Technical Communication Programs
Bill Macgregor 109

Technical Communication Programs and Service Learning: Making the Connections
Kris Sutliff 111

International Connections
Integrating Image Restoration Rhetoric into Professional Writing Courses
Gwendolyn Gong 115

Theoretical and Technological Barriers to International Communication:
The Case of the People's Republic of China
Sam Dragga 116

Restructuring Our Undergraduate Programs:
Internationalizing Our Curricula
Herb Smith 117

International Exchanges and Internships
Debby Andrews, Mary Coney, and Judy Ramey 119

24th Annual Business Meeting 120

Business Meeting Agenda 122

Minutes of the Business Meeting at the Twenty-fourth Annual Meeting 124

CPTSC Financial Report 128

Executive Committee Meeting 129
Minutes of the CPTSC Executive Committee 132

Appendices

Appendix A: CPTSC 1997 Conferees 139

Appendix B: Annual Meetings, Sites, and Dates 145

Appendix C: 1994-1996 and 1996-1998 CPTSC Officers 147

Appendix D: CPTSC List of Members 149

Appendix E: Previously Published CPTSC Documents 164

PROGRAM

Connections
in
Technical and Scientific Communication

24th Annual Meeting of the
Council for Programs in
Technical and Scientific Communication

October 16-18, 1997

Austin, Texas

1997 Program Hosts: CPTSC's Texas Partners

- Bob Jarrett, The University of Houston/Downtown
- Jimmie Killingsworth, Texas A&M University
- Deborah Rosenquist, Dell Computer Corporation
- Carolyn Rude, Texas Tech University
- Henrietta Shirk, The University of North Texas
- Katherine Staples, Austin Community College

1997 Program Chair:
Stuart Selber

Opening Speaker:
Lester Faigley

Closing Speaker:
Nell Ann Pickett

Banquet Speaker:
Steve Bernhardt

Special thanks to CPTSC 1997 Donors:

- Dell Computer Corporation
- Eben Ludlow, Allyn and Bacon Publishers
- National Instruments
- SAS Institute Inc.

Thanks go to our volunteers:
Floyd Clark
Kelli Cargile Cook
Monica Lake
Sherri Miles
Mary Kay Olenak
Nancy Singh
Jeff Todd

Thursday, October 16, 1997

4:00 – 6:30 pm	Registration	Foyer E Lobby Level, Marriott
6:00 – 8:00 pm	Reception and Fajita Buffet Sponsored by Dell	Poolside First Level, Marriott
8:00 – 9:00 pm	Opening Speaker Lester Faigley	Salon E Lobby Level, Marriott

Friday, October 17, 1997

7:00 – 8:00 am	Continental Breakfast	Capitol View Terrace North Lobby Level, Marriott
7:30 – 8:30 am	Registration	Foyer E Lobby Level, Marriott
8:00 – 8:30 am	Opening Session	Salon E Lobby Level, Marriott
8:30 – 9:50 am	General Session I	Salon E Lobby Level, Marriott
9:50 – 10:10 am	Coffee Service	Salon E Lobby Level, Marriott
10:10 – 11:30 am	Concurrent Session 2A	Capitol View Terrace South Lobby Level Marriott

10:10 – 11:30 am	Concurrent Session 2B	Salon E Lobby Level, Marriott
10:10 – 11:30 am	Concurrent Session 2C	Salons FG Lobby Level, Marriott
11:30 – 1:00 pm	Lunch (on your own) Registration packets include a list of nearby restaurants	
1:00 – 2:20 pm	Concurrent Session 3A	Capitol View Terrace South Lobby Level, Marriott
1:00 – 2:20 pm	Concurrent Session 3B	Salon E Lobby Level, Marriott
1:00 – 2:20 pm	Concurrent Session 3C	Salons FG Lobby Level, Marriott
2:20 – 2:40 pm	Coffee Service	Salon E Lobby Level, Marriott
2:40 – 4:00 pm	Concurrent Session 4A	Capitol View Terrace South Lobby Level, Marriott
2:40 – 4:00 pm	Concurrent Session 4B	Salon E Lobby Level, Marriott
2:40 – 4:00 pm	Concurrent Session 4C	Salons FG Lobby Level, Marriott

4:10 – 4:40 pm	Closing Speaker Nell Ann Pickett	Salon E Lobby Level, Marriott
6:00 – 7:00 pm	Preprandial Cash Bar	Capitol View Terrace Lobby Level, Marriott
7:00 – 9:00 pm	Banquet Speaker: Steve Bernhardt	Capitol View Terrace Lobby Level, Marriott

Please bring your meal ticket to the banquet to help the servers identify your meal choice.

x

Saturday, October 18, 1997

7:00 – 9:00 am	Breakfast (on your own)	
9:00 – 11:45 am	Business Meeting (Coffee served)	Capitol View Terrace Lobby Level, Marriott
11:45 am – 12:20 pm	Transport to Lunch	Vans will load in the Marriott Driveway Area
12:30 – 3:00 pm	Barbecue Buffet Lunch (boat leaves at 12:30!)	Hyatt Dock (map to the dock is provided in the registration packet)
6:40 – 7:40 pm	Transport to the dessert party	Marriott Driveway Area
7:00 – 10:00 pm	Dessert and Coffee Party	Home of Katherine Staples 508 Park Blvd. (map to the dessert party is provided in the registration packet)

General Session I
Salon E, Lobby Level, Marriott
8:30 – 9:50 am

Theoretical Connections
Moderator: Steve Bernhardt

Why Do I Have To Read This Boring Stuff?: Theory as the Connection between School and the Real World
Marilyn M. Cooper

Crafting Artifacts, Crafting Cultures, Crafting Selves: Historicizing Theory as Use in Technical and Scientific Communication Curricula
Robert R. Johnson

Composition and Technical Communication: Seeking the Theoretical Connections
Carole Yee

Theories in Technical Writing Programs? Not If But Which
Davida Charney

Do We Have a Theory of Contexts in Technical Communication?
M. Jimmie Killingsworth

Concurrent Session 2A
Capitol View Terrace South, Lobby Level, Marriott
10:10 – 11:30 am

Legal and Ethical Connections
Moderator: Carolyn Rude

Who Owns a Web Site? An Initial Discussion of Intellectual Property Rights in Technical Writing Projects
Daniel G. Riordan

Can I Import This Web Page Into My Project? Connections Between Technical Communication and Intellectual Property Concerns
Laura J. Gurak

Who Owns My Work? The Practical Side of the Work-For-Hire Doctrine
TyAnna K. Herrington

How Can We Treat Ethics Issues Ethically in Technical Communications Programs?
Nancy Allen

When Worlds Collide: Corporate Problems Invade the Classroom
Ann S. Jennings

Concurrent Session 2B
Salon E, Lobby Level, Marriott
10:10 – 11:30 am

Professional Development Connections
Moderator: Debby Andrews

Issues of Quality in Academic Programs
Mike Keene

What Should Technical Communication Educators Know About Professionalization?
Gerald Savage

Connections Among Programs, Students, and the Workplace
Glenn Broadhead

What's That Buzz?: Too Many Connections in Technical and Scientific Communication
Sam Geonetta

Concurrent Session 2C
Salons FG, Lobby Level , Marriott
10:10 – 11:30 am

Literacy and Technology Connections
Moderator: Stuart Selber

The Challenges and Promise of Technology-Rich Facilities: From Exploitation to Critical Practices
Dickie and Cynthia Selfe

Connecting Research in Technical and Scientific Communication through the Internet
Don Payne

Tools for Scholars and Other Knowledge Workers: Connecting Computer Technology to the Curriculum
Pamela S Ecker

Securing Employment by Navigating Cyberspace? Raising Questions for Technical Communication Programs
Tim Fountaine

Synthesizing Technical and Critical Literacies: A Curriculum for the Class of 2001
Craig Waddell and Dale Sullivan

Concurrent Session 3A
Capitol View Terrace South, Lobby Level, Marriott
1:00 – 2:20 pm

Industry Connections
Moderator: Deborah Bosley

Hiring Those Who Can and Do and Teach: The Faculty Connection to Workplace Practices

Louise Rehling

Academic-Industry Advisory Boards in Technical Communication
Kenneth T. Rainey

University Programs Working in Collaboration with Professional Organizations
Christine Abbott

Industry Partnerships in Usability Testing
Carol Barnum

Connections in Technical and Scientific Communication with Workplace Environments: Beneficial Partnerships That Neither Side Can Ignore
Mohsen Mirshafiei

Concurrent Session 3B
Salon E, Lobby Level, Marriott
1:00 – 2:20 pm

Curricular Connections
Moderator: Carole Yee

Adding Value to the Technical Communication Program: The Need for Required Research Methodology Courses
Elizabeth Pass

Can We Resolve the Visual Analysis Dilemma in Document Design Curricula?
Brian Pedell

The Connection of Risk Communication, Technical Communication, and Civic Discourse: Programmatic Problems and Possibilities
Jeffrey T. Grabill

Service Courses Don't Have to be Servants Anymore: The Role of Environmental Communication in the Technical Communication Classroom
Hillary Hart

Some Rhetorical Comparisons of Technical and Scientific Communication
Elizabeth R. Turpin

Concurrent Session 3C
Salons FG, Lobby Level, Marriott
1:00 – 2:20 pm

Distance Learning Connections
Moderator: Cindy Selfe

Examining the Culture of Distance Education: Ideologies and Technologie
Ann Hill Duin and James Frost

The Impact of Distance Learning on Technical Communication Programs
Patricia Goubil-Gambrell

How to Make Distance Education Work: Planning Ahead and Getting It Right the First Time
Kelli Cargile Cook

Failure to Connect: Collaboration and Distance Learning in Scientific and Technical Communication Programs
Amy Hanson

Delivering On-line Degree Programs: Connecting Graduate Technical Communication Programs to Practitioners in the Work Place
Nancy M. O'Rourke

Concurrent Session 4A
Capitol View Terrace South, Lobby Level, Marriott
2:40 – 4:00 pm

Disciplinary Connections
Moderator: Laura Gurak

Cross Talk: Technical Communication and Technical Curricula
Diane Atkinson and Betsy Aller

A Simulation of the Discipline(s): Undergraduate Technical and Scientific Writing Programs
Ed Nagelhout

Making Interdisciplinary Connections: A Small Technical Writing Program Struggles to Survive
Celia Patterson

Connecting Technical Writing to Creative Writing and Beyond
Bruce Maylath

A Rationale for Including Creativity Training in Technical Communication Programs
Henrietta Nickels Shirk and Howard T. Smith

Concurrent Session 4B
Salon E, Lobby Level, Marriott
2:40 – 4:00 pm

Community Connections
Moderator: Louise Rehling

The Public and Our Programs: Recontextualizing the Public Sphere in Technical and Scientific Communication
Angela Petit

Thinking about our Connections (and obligations) to the Public Sphere
Karen Rossi Schnakenberg

Building a Graduate Certificate Program: Making Connections With the Community-at-Large
Deborah S. Bosley

For a Service-Learning Pedagogy in Professional and Technical Communication Programs
Bill Macgregor

Technical Communication Programs and Service Learning: Making the Connections
Kris Sutliff

Concurrent Session 4C
Salons FG, Lobby Level, Marriott
2:40 – 4:00 pm

International Connections
Moderator: Kenneth Rainey

Integrating Image Restoration Rhetoric into Professional Writing Courses
Gwendolyn Gong

Theoretical and Technological Barriers to International Communication: The Case of the People's Republic of China
Sam Dragga

Restructuring Our Undergraduate Programs: Internationalizing Our Curricula
Herb Smith

International Exchanges and Internships
Debby Andrews, Mary Coney, and Judy Ramey

Keynote Address Abstract
Literacy by Design

Lester Faigley
University of Texas, Austin

Lately the World Wide Web, most powerful publishing technology ever created to distribute both words and images, has provoked an eruption of jeremiads about how the Web is destroying literacy as we conceive of it in the academy—that critical thinking and reflection, a sense of order, dialectical interaction, logical relations in texts, depth of analysis, trails of sources, and the reform mission of public discourse are all going to be lost. The coming of the Web, however, does not have to be viewed as a loss to literacy. Images and words have long coexisted on the printed page and in manuscripts, but relatively few people possessed the resources to exploit the rhetorical potential of images combined with words. This presentation demonstrates that literacy has always been multidimensional and argues that we are only now becoming fully aware of its multidimensionality because computer technologies have made it possible for many people to produce and publish multimedia presentations.

THEORETICAL CONNECTIONS

Why Do I Have To Read this Boring Stuff? Theory as the Connection between School and the Real World

Marilyn M. Cooper
Michigan Technological University

In 1990 I went to my first CPTSC, in San Diego, and argued for the necessity of critical theory as part of the education of technical communicators. Steve Bernhardt strongly objected to my talk, arguing, as Davida Charney does here in her abstract, that "Teachers who are committed to radical cultural critique cannot be sanguine about helping future scientists, engineers, and managers succeed in their careers when they see these careers as likely to perpetuate political oppression." Last year in Oxford, after my presentation on postmodern ethics in the corporate world, Steve remarked on how much I had moderated my views. I replied that at least two of his conclusions in his keynote address about what we do well — seeing both writing and technology as essentially social, and seeing ourselves as teachers and rhetoricians as agents of cultural change — were precisely what I have been arguing for over the last six years. Even though I'd say we're both skilled rhetoricians, I don't think Steve and I have reached consensus, but our positions do seem to have collapsed into one another to a certain extent. What has brought this about, what has really has changed, is something that was evident in his discussion of his consulting work with Roche Pharmaceuticals in Switzerland and that I described explicitly in my presentation, and that is the nature of the workplace, and especially of the workplaces the graduates of our STC programs will enter. In many of these workplaces, the traditional distinction and opposition between managers and workers has dissolved, and many (though certainly not all) oppressive management and marketing practices have begun to vanish — not because they were seen as unethical but because they no longer work. In such workplaces, technical communicators are inescapably agents for cultural change, and they need new abilities and understandings in order to take on this new responsibility.

My claim is that the new global economy demands of technical communicators critical abilities and flexibility that can be efficiently and effectively developed by studying a variety of critical theories. TC consultants who will be working, as Steve said, "within large global bureaucracies with many local, competing cultures and agendas" need to understand not only how responsibility for the long-term success of projects is distributed to all individuals in the team, as I discussed last year, but also how to negotiate understanding within conflicting, semi-stable webs of cultural, technical, and economic values and facts. The analysis of how such contingent structures of values and facts are formed and how they operate has been the work of critical theorists over the past 40-50 years, and they have elucidated a model of social structures as resulting from ongoing negotiations among individual agents and institutions which structure one another in reciprocal ways. Thus **language,** in the theories of Bakhtin and Wittgenstein, is responsive to individual acts and is at the same time structured by the institutionalized values and meanings encoded in it as a result of past individual acts; **power,** according to Foucault, begins in relationships between free individuals and solidifies into institutional forms which structure but do not ever completely determine individual relationships; **social and cultural structures**, as analyzed by Giddens and Bourdieu, are built out of decisions and compromises made by individuals interacting in groups which can become so habitual and accepted as to seem foundational, but which are always being renegotiated and changed in response to changing

circumstances; **ecological systems,** as described in chaos theory, the Gaia hypothesis, and deep ecology, are seen as the result of extremely complicated reciprocal interactions among the various actors and forces in the material world; and **technology,** as theorized by Heidegger and Feenberg and Hughes, is seen not as the inexorable and often alienating march of progress but rather as forming in and responsive to social needs and desires.] As such, critical theories are one of the main connections between the academic world and the real world: they help people to understand better and deal with more effectively the problems that face them.

I'd like to demonstrate briefly the way theories can help technical communicators, in particular how Andrew Feenberg's theory of a technical code and Lyotard's theory of the differend can help students understand the problems involved in improving our understanding of and use of technologies.

The argument of Feenberg's *Alternative Modernity* is simply that technological devices are "negotiated achievements involving many partners" (p. 4), that the design and uses of technologies are not the result purely of choosing the best technical solution but rather result from a negotiation between a number of possible good designs and uses and the values and beliefs that structure the society in which they are conceived. The **technical code** refers to those features of technological devices that have been determined by dominant values and beliefs in a society that are so well agreed to that they are invisible and seem to be just part of the technology. Like all belief systems, technical codes are negotiations that are relative to the particular situation in which they develop, and as situations change, they can become more or less useful. Because they are not seen as belief systems but have been incorporated as a seemingly essential part of a good technology, they can be difficult to critique and change.

Feenberg analyzes instances in which aspects of a technical code have come to inhibit solutions to problems. For example, the protocols involving recruitment of subjects in experimental medicine have built into them some assumptions about patients' roles. The sick role, which releases patients from social responsibility and isolates them from other sick persons so that they may concentrate on getting better, while it may make sense for acute illness, deprives the chronically ill of the ability to participate in making decisions about their care and from discussing and sharing information with other people in the same situation. Feenberg argues that the AIDS epidemic has highlighted how these assumptions which structure the technology of care need to be rethought, and that changes in the conception of the sick role will lead to effective changes in the protocols of experimental medicine.

Lyotard's notion of the **differend** explains particularly well the general phenomenon exemplified in Feenberg's example: the way "normal" usage and "standard" procedures encode and occlude past social agreements. A lot of the time, this just makes everyday life easier, but sometimes it blocks us from understanding and finding new solutions to important problems. Lyotard notes how values encoded in forms of discourse shape the kinds of arguments that can be made, how, for example, the capitalist assumption of exchange as the basis of value blocks a worker from explaining how his or her labor-power is not a commodity. This situation, when there is a felt need to express something that is difficult or impossible to say because it challenges the underlying assumptions of the discourse, is what Lyotard calls the differend, and he argues that bearing witness to differends by finding idioms for them is an important mode of cultural and social change.

Finding idioms for new ways of thinking about technology and understanding how both writing and technology are social are indeed core competencies for technical communicators. If we expect our students to develop these competencies, we need to help them understand how social values come to be embedded in "neutral" technical practices and to recognize those moments that call for a renegotiation of language and assumptions. Reading critical theories will indeed lead students to question normal assumptions and practices, but in the contemporary workplace such questioning is a valuable skill, not an impediment.

Theories for Technical Communicators (and Works Cited)

Technology:

Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, eds. The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology. Cambridge: MIT P. 1994.

*Andrew Feenberg. Alternative Modernity: The Technical Turn in Philosophy and Social Theory. Berkeley: U of California P, 1995.

Martin Heidegger. "The Question Concerning Technology," in *Basic Writings.* Ed. David Farrell Krell. New York: Harper & Row, 1977.

Ecology:

*Fritjof Capra. The Web of Life: A New Scientific Understanding of Living Systems. New York: Doubleday, 1996.

Language:

M. M. Bakhtin. "Discourse in the Novel," in *The Dialogic Imagination.* Ed. Michael Holquist. Tr. Caryl Emerson and Michael Holquist. Austin: U of Texas P, 1981.

*David N. Dobrin. *Writing and Technique.* Urbana, IL: NCTE, 1989.

Jean-François Lyotard. *The Differend: Phrases in Dispute.* Tr. Georges Van Den Abbeele. Minneapolis: U of Minnesota P, 1988.

Power:

*Michel Foucault, *Discipline and Punish: The Birth of the Prison.* Tr. Alan Sheridan. New York: Vintage, 1979.

"The Subject and Power," in *Michel Foucault: Beyond Structuralism and Hermeneutics,* by Hubert L. Dreyfus and Paul Rabinow. 2nd ed. U of Chicago P, 1983.

Ethics:

*Zygmunt Bauman. *Postmodern Ethics.* Oxford: Blackwell, 1993.

Social Systems:

Pierre Bourdieu. *The Logic of Practice.* Tr. Richard Nice. Stanford: Stanford U P, 1980.

Anthony Giddens. Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis. Berkeley: U of California P, 1979.

*Most accessible for students.

Crafting Artifacts, Crafting Cultures, Crafting Selves: Historicizing Theory for Use in Technical and Scientific Communication Curricula

Robert R. Johnson
Miami University (Ohio)

My position is straightforward: We have become disconnected in modern technical communication curricula with ancient or premodern conceptions of making, of crafting. The implications of my position, however, are not so neatly arranged. That is, technical communicators have become agents of modernized forms of making - forms that disconnect us not only from our "crafting roots," but also from our materials, our cultures, and our selves. Consider the following by Carl Mitcham from his book, Thinking Through Technology: The Path Between Engineering and Philosophy to elaborate these various disjunctions: "Premodern making was and is apt to see all making as a kind of 'cultivation', whereas [modern] engineering action virtually abandons concern with specific sensuous form in favor of methods of 'construction' that can meet the needs of clients and users....[b]efore the rise of engineering and its abstract conception of modern making action, types of making [were] distinguished primarily according to material, cultural, and ritualized formations. Not only are making as bricolage and making as craft oriented toward cultivation of nature, but in themselves these activities become cultures. Ethos does not need to strive by means of ethics to impose itself on a technical action that only in rare instances transcends it specific roots." (p. 214) [Italics (apostrophes in online version) are mine] My position statement, read through Mitcham's history of concepts of making, is open to various interpretations. A Marxist might claim an alienation from the material world; a feminist might point to a neglect of the material consequences of craft; a rhetorician might point to an impoverished sense of techne. From a technical communicator's point of view, however, this historically situated reading of craft provides us with a window onto our relationship with technology: a lens for reflexively examining what we do in our everyday contexts, academic or otherwise. If we agree with Mitcham even to a limited degree, the consequences for technical communication programs are many. In my presentation I would like to begin rethinking how we might theorize curricula as craft. I will start with a short history of craft, and then follow with this (incomplete) list of questions to spur conversation:

- How might we conjoin ancient and modern concepts of making in our curricula?
- When we base a curriculum upon a theory, say problem-solving, do we draw from its ancient origins as well as upon its modern, more engineering-based premises? Put another way, do we place our curricular practice into historical relief?
- When we look at the ethics in/of our curricula, do we merely look at "impacts" and "outcomes," or do we have a sense of how ethics is theoretically situated within the action of making the artifacts of our profession?
- If, as some argue, technical communication pedagogy is theorized as "instrumental," then what does that say about our values? Would a historically situated craft-based approach have a different set of values?
- Have technical communicators surrendered ethos to process? Has efficiency had a stronger effect on what determines our work than we imagine?

- Assuming that current industry practices are what Mitcham might call "engineering-based," how might a rethinking of curricula as "craft-based" be received by those in the nonacademic community?

To what extent are writers (and audiences) identities defined by the processes of making/crafting? Are the "audiences of craft" different from the "clients and users" that Mitcham mentions? o Finally, how do we define what it is that we do, and ultimately what we are as technical and scientific communicators? Are we artisans, or engineers, or something else?

Composition and Technical Communication: Seeking the Theoretical Connections

Carole Yee
New Mexico Tech

Academics in Technical Communication and in Composition often distinguish between the theories, histories, and disciplines of their fields, seeing Technical Communication and Composition as having separate histories and separate theories. And on some issues they are separate. But although Technical Communication and Composition both fall under the heading of rhetoric-based writing program, undergraduate Technical Communication programs often fail to incorporate or even include just a little Composition history and theory, and vice-versa. Technical Communication's identity as a practice-based, applied discipline may suggest Composition theory is peripheral, even irrelevant, to an undergraduate Technical Communication program.

Against this conventional view that a great divide separates Composition and Technical Communication theories and histories, I would position Composition's history and theory firmly and squarely in the undergraduate Technical Communication curriculum. Both fields are products of the post-Sputnik rush to create a workforce educated to address the complex challenges of production of knowledge for a world super power. Consequently, the modern forms of both fields can date their births to around 1963, as Stephen North says, when 4Cs helped to redefine Composition. "What marks [Composition's] emergence as a nascent academic field more than anything else is [a] need to replace practice as the field's dominant mode of inquiry. The same was true to some extent, of course, for all of the 'reformed' English; granting priority to knowledge generated by the methods of the academy necessarily threatened to undermine the authority of the practitioner" (15). Technical Communication loses, I believe, from not seeing itself as part of that history shared with Composition.

In addition to a shared birth in modern history, both Composition and Technical Communication can partake of the richness of the narrative that tells the story of their Olympian struggles with similar theoretical issues. Such shared issues are ones that question the authority of experience or ones that ask whether the personal essay or the organizational report or the World Wide Web is democratic.

Finally, both Composition and Technical Communication struggle in the postmodern world with re-contextualization of the self, whether that self is the de-centered subject in composition or the ever-more complex discovery of audience as not-self in technical communication. The shift from the analyzed audience in Thomas Pearsall's *Audience Analysis in Technical Writing* in 1969 to our adamant refusals in the technical communication literature in the late 1990s to absolutely define, manipulate, or guilt-trip the audience, is to see a transformation not unlike that in Composition concerning the authority of the self in the personal essay.

In short, the two disciplines may not be as distinct as we once thought. Students in Technical Communication, even at the undergraduate level, may find many puzzles they work also being worked in the sister field of Composition.

Sources:

Bazerman, Charles. *Shaping Written Knowledge: The Genre and Activity of the Experimental Article in Science.* Madison: Wisconsin UP, 1988.

North, Stephen M. *The Naming of Knowledge in Composition: Portrait of an Emerging Field.* Upper Montclair, NJ:Boynton/Cook, 1987.

Villanueva, Jr. Victor, Ed. *Cross-Talk in Comp Theory: A Reader.* Urbana: NCTE, 1997.

Theories in Technical Writing Programs? Not If But Which

Davida Charney
University of Texas at Austin

Broadly speaking, most technical writing programs subscribe, at least to some degree, to three over-arching goals:

- to promote the design of texts that are more effective for readers,
- to acculturate students into a professional discourse community, and
- to improve workplace conditions for professional technical writers.

To achieve these goals, faculty in technical writing draw, knowingly or not, on theories of how people interact with each other and with texts. Research in technical and professional writing has traditionally drawn heavily on theories from a variety of fields, including communication, rhetoric, psychology, human factors, and education. A good bit of human factors research has focused on effective ways to design and present information, with researchers comparing alternative versions to see which ones are most effective for different kinds of readers. Some research has also focused on the processes of writing, for example showing the benefits of user-testing or planning strategies for improving documents like forms and computer manuals. Some work of this sort, such as user-testing, has found a place in the workplace itself and is used to test and refine specific documents. More general studies, published in scholarly and professional journals, have drawn on educational and psychological theories of learning and memory and on rhetorical theory. Some of this research has influenced how technical writing is taught and has found its way into various guidelines and technical writing textbooks. Researchers have also used theories and methods from sociology and anthropology to describe workplace practices and how they affect the creation, dissemination, and reception of written texts, to analyze how such interactions can lead to disaster (as in the explosion of the shuttle Challenger) and to argue for changes in strategies both in the workplace and in classrooms where future technical writers, engineers, scientists, and managers are preparing to enter the workplace. These studies have contributed to major changes in theories of the rhetoric and sociology of scientific and technical practice. In particular, they seriously challenge the ideal of static-free information transfer from writer to reader that so long dominated technical writing pedagogy. These theories have had such a pervasive influence, that one really cannot ask *if* theory has a place in technical writing programs, but rather *which* theories.

Recent discussions of these questions remind me of similar occasions in the recent history of English studies when the term *theory* was appropriated by scholars who used it to mean *critical theory*. As a new graduate student in rhetoric and composition with a background in psycholinguistics, I was astonished to meet graduate students in English who would describe themselves as "doing theory," while others would insist that they "don't do theory." Similarly, in the current context of technical writing, *theory* is being used by some scholars to refer fairly exclusively to cultural critique which draws on postmodernist, feminist, and Marxist/post-Marxist theories. Cultural critics these days generally disapprove of science and engineering and their methods, including the use of "scientific" research methods in technical communication, believing that these approaches reinforce what they see as oppressive dominant ideologies in the

academy and the workplace. In our field, these critics include Nancy Blyler, Carl Herndl, Marilyn Cooper and Elizabeth Flynn. For them, research should not be used to foster the communication goals of management but to mobilize employees against entrenched power structures. Needless to say, the practical and critical strands in technical communication are at odds with each other, not just over research and theory but also pedagogy. Teachers who are committed to radical cultural critique cannot be sanguine about helping future scientists, engineers, and managers succeed in their careers, when they see these careers as likely to perpetuate political oppression.

My own position (described at length in recent articles in *CCC* and *TCQ*) is that critical theorists do not have an exclusive claim to the goal of fostering social justice. These critics mandate too narrow a set of values that may be considered humanist and cut off important avenues of inquiry and critique that historically have advanced both the sciences and humanities and that have undergirded progressive social action.

Students and teachers of technical writing are already being influenced by a wide range of theories. They need to learn about a full range of theories in order to act as informed participants and contributors to the field. They should not be made to feel that cultural critique is the only perspective that allows them to act justly as professionals and citizens.

Works Cited

Blyler, Nancy. "Research as Ideology in Professional Communication." *Technical Communication Quarterly* 4 (1995): 285-313.

Charney, Davida. "From Logocentrism To Ethocentrism: Historicizing Critiques of Writing Research." *Technical Communication Quarterly* (Winter 1997, in press).

Charney, Davida. "Paradigm and Punish" (Response to Marilyn Cooper). *College Composition and Communication* 48.4 (1997): 562-565.

Charney, Davida. "Empiricism is Not a Four-Letter Word." *College Composition and Communication* 47.4 (1996) 567-593.

Cooper, Marilyn. "Distinguishing Critical and Post-positivist Research" (Response to Davida Charney). *College Composition and Communication* 48.4 (1997): 556-561.

Flynn, Elizabeth. "Feminism and Scientism." *College Composition and Communication* 46.3 (1995): 353-69.

Herndl, Carl. "Teaching Discourse and Reproducing Culture: A Critique of Research and Pedagogy in Professional and Non-Academic Writing." *College Composition and Communication* 44 (1993): 349-63.

Do We Have a Theory of Context for Technical Communication?

M. Jimmie Killingsworth
Texas A&M University

The simple answer is no—and I argue we need one, but why? The "social view" of technical communication has gained a number of adherents in recent years. Through this emphasis in research and criticism, we have gained new awareness of the multiple and shifting contexts of technical communication. Some of the best work these days comes from studies of international communication, which treats cultures as contexts. But cultures in the large sense of anthropology are bound to seem different from the scaled-down and socially limited "corporate cultures" studied by our workplace ethnographers, though these situations are also contexts. And how do these relate to the yet more ephemeral "rhetorical situations" of individual document authors and users—yet another kind of context?

Just as the words that surround any given utterance impart meaning to the utterance in a literal context, the surrounding elements of document use, history, situation, and culture provide "screens" for representation and interpretation. The metaphor of the context provides a conceptual link among these different ways of creating meaning. By extending our understanding of how linguistic texts and contexts interact, we should be able to move from enhanced awareness to critical understanding of contexting as a semiotic action crucial to effective technical communication. The possibility of controlling meaning through this critical understanding still remains problematic, however.

LEGAL AND ETHICAL CONNECTIONS

Who Owns a Web Site? An Initial Discussion of Intellectual Property Rights in Technical Writing Projects

Dan Riordan
University of Wisconsin-Stout

Introduction

During the spring semester 1997 my students in 326-515 Technical Writing created web pages. As part of the assignment sequence one student created a web page for a local company, for which he worked as a part-time employee.

The project began with an informal arrangement that student would create the site as a class project and that the company would place the site on a server to use as one method of disseminating information about itself to potential customers. At the conclusion of the project some difficulties arose over who had control of the site, who actually owned it, and whether the student could keep a copy for his portfolio. The situation was eventually resolved amicably—they own the site and he kept a copy. He still works for them.

During the disagreement, I asked the members of the cptsc-l listserv for advice. I received 19 responses to my original query, containing advice that sometimes contradicted.

The respondents focused on two questions: Who owns the work? and Can the student keep a copy for his/her portfolio? While a common sense answer clearly emerged, a number of other issues also arose, and a good deal of practical advice was tendered.

Common sense. The common sense answer contained these points:

- the web site is a "work for hire" project
- the company owns the work
- the student gets a copy to place in a portfolio
- the student gets a grade
- the arrangement is clarified before work begins.

The opinion appeared to be that, granted everyone's goodwill, this arrangement will be satisfactory to almost all parties. In this situation the key component is to arrange the deal ahead of time (Hey, Kemnitz, Murray, Wahlstrom).

Other More Difficult Issues. However, as the discussion on the listserv continued, other issues, potentially quite troubling, arose.

Ownership, part 1. The most engaging issue involved ownership. Considering the finished product as work for hire assumes several conditions. The key assumptions are that work for hire is performed on company time with company equipment using company information. In the most clear cases this work is performed by workers who have signed an employment agreement, a non-disclosure agreement, or both. In cases so defined the work clearly belongs to the company whose representatives have control of it. The creator must give the product to the company, and, since it is proprietary, may not keep a copy of it, unless the company gives him or her a copy (Hey Bernhardt a, Bernhardt b, Johnson, Hoft).

A common example of this arrangement appears to be the intern who is unable to show his or her work to the university's intern director because the company will not give permission for its proprietary documents to be viewed by a non-employee (Bernhardt b).

Ownership, part 2. While that view seems very clear, other interpretations of the situation are possible. Many student projects do not exactly fit these conditions. Many students in the "do it as a class project" situation do not sign employment or non-disclosure agreements, do not perform the work on company time, or company equipment, and often create or dramatically revise company documents. Furthermore, according to one lawyer respondent, everything that a person creates has copy protection (McGowan).

In these "looser" cases, it can be argued that the work is the student's and that actually the student is under no obligation to give the work to the company, but only to the teacher in order to receive the grade (Stern a, Stern b) The student in this case apparently is prevented from disseminating the information only by moral arguments (Peeples).

In addition, it appears to be possible to argue that the creator is an independent contractor who has the right to license the work to the company (McGowan), but who then, presumably, could also revoke the license. As Heylar and Doudnikoff point out, "If the hiring party doesn't have the right to control the manner and means of product development, the maker of the work is considered an independent contractor" (664) who owns the copyright.

Liability. This new interpretation raised an issue that the current discussion did not answer—what kind of liability exists? In particular can the student, instructor, or university be held liable for material that appears on the site or the method used to place it onto the site? (Peeples)

Complicated Copyrights. Various authors have addressed tangential issues that seem to bear on this situation. Ann Okerson in "Who Owns Digital Works" reviewed the copyright issues involved with a web site. She points out that the items that appear on one screen of a site could actually have many copyright owners—up to 20 in her example (83). Heylar and Doudnikoff make a similar point, indicating that a film clip could have as many as 12 different copyright owners (667).These staggering ownership possibilities complicate the instructor's role. Not only is there an issue of the student's relation to the company but also to any sources of data that might have copyright owners. In this situation can the student be regarded as a writer who along with a lot of other people have some rights to the site?

Suggestions for Action. The practical advice in tendered in this situation included the following:

Make an agreement. If a gentle person's agreement is not possible or desirable, then the best advice appears to that "written agreements are the best way to remove all doubt of copyright ownership" (Helyar and Doudnikoff, 664). Short of a written agreement is a clear articulation of expectations before the work begins.

Develop a productive atmosphere. A different approach is to work on the "atmosphere" of the university/business partnership. The idea is to achieve a sense of productive experience—these are students learning how to be productive members of the economy, producing an object of worth at little cost to the company. This situation is good for everyone and so, when a confrontational situation arises, negotiation between the student, instructor and company should emphasize this cooperative model (Kalmbach b, Johnson).

Work for non-profits. Perhaps the university should not provide free labor for companies who are able to pay and expect to use the student's work to increase their profits. Perhaps universities

should focus these projects on non-profits, who are less liable to be confrontational and who do not use the work for profit (Bosley).

Find alternate methods of recognition. If a further testament of the student's work is needed respondents suggested two ways to provide it. In the site could be a link to a "site history" which would detail the student's (and presumably the university's) contribution and then later contributions by others as the site undergoes its inevitable changes. The employer could simply provide a letter describing the work of the student (Hoft, Kalmbach).

Consider sources of information on website issues. One website that deals with issues of web ownership is Virtual Magistrate (http://vmag.vcilp.org) (Hoffman).

Conclusion. The common sense approach outlined at the beginning of this article probably is the one that most instructors will find useful. The key is to articulate the expectations ahead of time. However, the complicated issues that exist in website law indicate that vigilance, care and further research will be necessary.

Works Cited

Bernhardt, Steve [a]."Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (13 May 1997).

Bernhardt, Steve [b]. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (15 May 1997).

Bernhardt, Steve [c]. "Re: Web page rights." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (21 May 1997).

Bosley, Deborah. "Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (16 May 1997).

Helyar, Pamela S. and Gregory M Doudnikoff. "Walking the Labyrinth of Multimedia Law." Technical Communication, Fourth Quarter, 1994, 662-671.

Hey, Phil. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (13 May 1997).

Hoffman, Rodney. "Virtual Magistrate." Personal E-mail (13 May 1997). Forwarded by Robert Royar, "Re Web Copyrights and Virtual Magazine." Personal E-mail (13 May 1997)

Hoft, Nancy. "Re: Help on a Web Question—Forwarded by Cindy." Personal E-mail (18 May 1997). Forwarded by Cindy Selfe. "Re: Help on a web question—Forwarded by Cindy. Personal E-mail (20 May 1997).

Johnson, Simon. "Request for Advice on Web Pages-Reply." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (14 May 1997).

Kalmbach, James [a]. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (13 May 1997).

Kalmbach, James [b]. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (13 May 1997).

Kemnitz, Charles. "Web Site Copyright-Reply." Personal E-mail (13 May 1997).

McGowan, Chad. "Your copyright questions." Personal E-mail (16 May 1997). Forwarded by Suzie Medders. "Web page rights." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (20 May 1997).

Murray, Chuck. "Re: Request for Advice on Web Pages." Personal E-mail (13 may 1997).

Okerson, Ann. "Who Owns Digital Works?" Scientific American, July 1996, 80-4.

Peeples, Tim. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (14 May 1997).

Riordan, Dan [a]. "Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (12 May 1997).

Riordan, Dan [b]. "Advice on Web Pages, part 2." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (03 June 1997).

Stern, Paula [a]. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (14 May 1997).

Stern, Paula [b]. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (14 May 1997).

Wahlstrom, Billie. "Re: Request for Advice on Web Pages." Internet. CPTSC-L, cptsc-l@clvm.clarkson.edu (14 May 1997).

Can I Import This Web Page into My Project? Connections Between Technical Communication and Intellectual Property Concerns

Laura J. Gurak
University of Minnesota

"Intellectual property" is not a term that typically comes directly to mind for those of us in technical communication—but the term designates an array of issues vital to the interests of anyone involved in a technical communication program. Intellectual property is important to teachers and researchers because it pertains to the fundamental use of print and electronic materials in our classrooms and our research; for example, how to use published works in writing classes, whether or not to put together coursepacks and provide handouts for students, whether or not students can access and distribute electronic information, and how teachers/authors can use student materials in their textbooks or research. Specifically, the concept and complexities of one facet of intellectual property, copyright, should be of primary concern to those in technical communication programs.

Most technical communication students and instructors have had some encounter with copyright, whether in the workplace (Should I use this photograph in my documentation?) or in the classroom (Can I reproduce this article for class?) And as our emphasis on computer technologies in technical communication increases, these and more complicated questions (such as the one in this paper's title) will grow in number. Electronic technologies, especially those associated with the Internet, have created a confusing and challenging time for copyright policy. Copyright law, based on the idea of physical property rights, where boundaries are clear, is now up against the new terrain of documents—from manuals to online help to books—containing sound, pictures, and texts that have multiple authors and are widely cut and pasted from email box to Web page to gopher site.

Yet despite copyright's persistence in our professional lives, few in technical communication truly understand copyright, fair use, or the implications that new technologies and new legislation will have on the future status of copyright. On the technological front, even though the Internet is raising serious questions about copyright in cyberspace, we rarely stop to thoroughly consider these issues when designing a Web page or teaching students how to search and download images for a class project. And in terms of legislation, two bills recently introduced into Congress to extend copyright's reach have received no attention in the technical communication literature, despite the impacts this legislation will have on all intellectual property, especially materials in the public domain. The current legislative and judicial tilt toward privatized intellectual property should be of serious concern to the profession, for if it continues, much of the work in the public domain that we and our students rely on will be off limits and available only to those willing to pay huge licensing fees. The images, sounds, and texts that we rely on so heavily for our classrooms, industry practice, and research may soon be available only on a pay-per-view basis, and this would be a sorry state of affairs for the discipline.

We can, however, take actions both professionally and in the classroom that will raise awareness about these issues and, if conducted with vigor and over time, help to educate ourselves and our students about copyright and fair use and also help to maintain the important balance between

the rights of the copyright holder and the rights of the public. Professionally, we can and should keep copyright in the foreground at our conferences and in our journals. In the technical communication classroom, copyright and intellectual property issues should be incorporated into the curricula, from specific classes on communication law to short sections and quizzes on electronic texts, images, and sounds. Many excellent resources on intellectual property are available via the Web, and most Universities have access to a law school or community lawyer who would gladly come and give a lecture on intellectual property issues. We should use these resources to educate ourselves and our students on the complicated but critical connections between intellectual property and technical communication.

Who Owns My Work? The Practical Side of the Work-For-Hire Doctrine

TyAnna K. Herrington
Georgia Institute of Technology

The work-for-hire doctrine is a legal fiction which makes the "author" of a work the employer or hiring party that contracted for the work, whereas, the actual "author" or "creator" of the work relinquishes copyright control when he or she becomes employed by the hiring party. Creators need a clear understanding of the legal ramifications of the work-for-hire doctrine because its potential effect on workplace writers as well as academicians in rhetoric and technical communication could be extreme. The legal fiction of "authorship," which arises from the doctrine creates a legal rather than actual attribution of authorship to an employer who controls the work of an employee. Workplace technical communicators as well as academicians should be aware that in some cases they may not retain rights in the work that they "author."

Under the work-for-hire doctrine, in effect, authors found to be producers of a work while within the exclusive control of their employer have no rights in their own work unless they have specifically contracted for them. Technical communicators and academicians in rhetoric and technical communication should be aware of the impact of the work-for-hire doctrine on copyright law because they both produce work for employers and also prepare students who will work for employers in relationships that could be considered work-for-hire.

Establishment of work-for-hire status is clear when employees create their projects at their employer's worksite, using their employer's equipment and supplies, and within an ongoing business relationship. But conflict arises when any one or any combination of factors are otherwise. Disagreement often arises over whether a work was created within or outside the creator's scope of employment. Employees may create their own work away from their place of employment and on their own time. In these cases, the works created fall outside of work-for-hire status and copyright ownership goes to the actual creator of the work because it was created outside the scope of his or her employment. Employee use of the Internet to connect to work from home also confuses the employee's work status.

The position status of creators of commissioned work also creates confusion. Translations, compilations, parts of films or other audiovisuals, atlases, "consumables" such as standardized tests and answer sheets, instructional texts, supplementary works, and contributions to collected works are often produced by contract on a one-time basis, and once the work is complete, the employment relationship ends. The copyright is thus held by the commissioned creator and not the employer in these cases. If the parties find this relationship undesirable, however, they can contract to consider their creations works for hire.

A work-for-hire relationship should be explicit , but because the Copyright Act does not define the term "employee," the Supreme Court has looked to agency-partnership law to find 13 factors to consider in determining whether a creator is an employee or independent contractor. Particularly in light of complications created by the use of the Internet, employers and employees should become aware of the issues surrounding work-for-hire.

How Can We Treat Ethical Issues Ethically in Our Classrooms?

Nancy Allen
Eastern Michigan University

How Can We Treat Ethical Issues Ethically in Our Classrooms?

Nancy Allen
Eastern Michigan University

Ethics is a classical theme of rhetoric that for many years was seldom heard or written about in our professional journals. Articles on ethics for the most part went unread. Now ethics is back as a much thought and talked about topic. In a quick look through some technical communication publication areas I found 12 journal articles focused on ethical issues published since 1994, one recent book on ethics, and a discussion list dedicated to intellectual property issues. In addition, the University of Minnesota has advertised a tenure track position for an assistant professor in science, technology, and ethics.

Has this resurgence of interest occurred because of a general concern for moral standards? Is our interest raised by emergence of the Internet and Web as new territories for which ethical standards and community wishes are unknown? Whatever the cause, and it' s probably a combination of many factors, this renewed interest in ethics offers us an opportunity to develop programmatic ways that we, as teachers of technical communication, might help our students become aware of ethical issues they may face in the future or may be facing now and of alternative solutions. In the past we, like society in general, may have given ethics passing but not explicit attention. Many technical communications textbooks, for instance, omitted ethics as a topic worthy of substantial treatment, framing it only as corporate liability. The pressures to be both ethical and profitable are often in conflict, but they don't nearly encompass all areas in which ethical issues arise in the technical communication field.

One of our ethical obligations is to prepare our students for their future professions. Looking at ethics from the perspective of an employee, some issues that we might consider with our students are:

0**Ethical Questions for the Workplace**

1) What happens to credit for ideas and materials within corporate reviewing procedures?
2) Should employees have privacy or ownership of their electronic communications?
3) If a technical communicator faces an ethical problem, what appropriate steps might he or she take without jeopardizing a job?

We also face multiple ethical issues in our classrooms:

Ethical Questions for the Classroom

1) In the broadest sense, what should we teach? In a listserv discussion this issue was framed as this question: Am I doing my students a disservice if I don't teach FrameMaker?
2) Should we teach our students to critique corporate practices or software?
3) Is it theft if we or a student copies the design of a web site?
4) Do we call on students who don't raise their hands as well as those who do? In other words, is equal treatment more important than adapting to individual needs?
5) Should attendance count toward grades?

Membership in a professional organization raises more ethical questions.

Ethical Questions for the TC Profession

1) Is there a code of ethics, a professional review board, an advice hot line, or set of guidelines on ethical issues for technical communicators?
2) Should we hold special seminars on ethics codes or ethics cases at conferences?

The resurgence of interest in ethics provides us with an opportunity to address ethical issues for technical communication education. Sam Dragga is providing leadership through ATTW, asking members of the discussion list to consider questions at the heart of technical communication education. He has also established an ethics committee, with Paul Dombrowski as chair, to recommend a set of ethical guidelines. As members of CPTSC we also need to consider how we include, or fail to include, ethics explicitly within our technical communications

programs. One solution might be a course on ethics, though our undergraduates' schedules are already heavily burdened. Another possible solution might be participation in an Internet discussion list, making it a source of advice for students and professionals with ethical questions. How we include ethics in our classrooms has important implications for our students, for our workplace connections, and for our relations with the public.

When Worlds Collide: Corporate Problems Invade the Classroom

Ann Jennings
University of Houston-Downtown

Academic programs and workplace environments connect and collide when students bring their employers' problems into the classroom. Students regularly bring such baggage into my University of Houston-Downtown service course, Business and Technical Writing. Most of these students are "non-traditional": they are older by five to thirty years than traditional college undergraduates and most of them work full- or part-time in such settings as corporations, law firms and courts, local and state institutions, law enforcement agencies, the military, medical offices, and hospitals. The students use business problems as topics for feasibility studies, proposals, and oral reports. Those problems provide ethical dilemmas for me, the students themselves, and their classmates. I have grade papers that reveal trade secrets of a major manufacturer, violations of medical ethics, problems in a probate court, and more. Classmates of the writers have listened to oral reports based on such topics. Why do students choose such topics? Some do because I require each student to provide his or her own "real" problem as the focus for several papers. Some do because the problems are so important that the students must solve them in the course of their jobs anyway. These students find the orderly approach of technical writing assignments compatible with their desire to work the problems out on paper. One student, for instance, requested my help in revising her proposal assignment so that she could submit it to an investigative committee of the state legislature. Are the students' employers aware that business problems are being brought to the classroom? In some cases, yes. The employers are interested in the research the students conduct and the structure they give to the problems; these employers encourage the students' efforts. In other cases, probably not. One student, for instance, asked me to honor confidentiality in regard to her topic, which by the end of the semester, she was discussing openly with the class. Her employer was a government agency grappling with extraordinary expenses. I did honor her request—but did other students? How should professors deal with possible betrayal of trade secrets, defamation, and other ethical issues? And when does an ethical problem become a legal one? Should we ban "real" business topics from the classroom? Develop a hold-harmless agreement and require students to sign it? Avoid oral reports so that the class as a whole does not know an individual student's topic? This complex mix of ethics, law, common sense, and good judgment needs further study

PROFESSIONAL DEVELOPMENT CONNECTIONS

Issues of Quality in Academic Programs

Mike Keene
University of Tennessee

My Assumptions:

- Quality is particular to each kind of program, and in that sense local, not global.
- Quality is most appropriately assessed first-hand, not from a distance.
- Quality is improved by publicizing successes, not by admonishing failures.

Issues That Challenge Quality in Academic Programs

The nature of the profession of technical communication, especially the way the demands of that profession change over time.

The nature of U.S. colleges and universities, especially the ways some aspects of those institutions resist change.

The intersection of 1 and 2--for example, when the inflexibility of academia collides with the rapidly changing aspects of tech. comm. as a profession.

1. Pressure comes from the nature of the profession of technical communication:
   - Today we all are struggling to keep up with rapidly evolving technology.
   - For a rapidly growing percentage of technical communicators, there is no foreseeable future in which one or two employers may support their whole career.

2. Pressure comes from the nature of academia:
   - Most tech. comm. programs today are located within English departments (or, at smaller colleges, within a department of humanities or some equivalent).
   - For most tech. comm. programs, the struggle to keep up with evolving technology is incredibly difficult.
   - The traditional demand that a tech. comm. major have both a writing background and a scientific or technical background must still be met.
   - As necessary "hard skills" (writing, editing, computers, chemistry, physics, etc.) become more clearly defined, the workplace also requires increasingly specialized "soft skills" that may require shopping around the university curriculum.
   - It is difficult to balance the kinds of learning students need to become successful technical communicators, but more difficult to find tech. comm. teachers with appropriately balanced backgrounds.

3. When Worlds Collide: Academic Programs in the 21st Century

Our programs need to be individualistic—free to make their own best adjustments to these pressures, free to change over time as the institutional setting or job market requires.

Implications

Pay attention to our roots.

Serve the immediate needs of our markets but keep our eyes on the larger picture.

Pay attention to the differences among our levels of instruction.

Position

Flexibility within programs and diversity across programs seem to be qualities to seek and to nurture.

What Should Technical Communication Educators Know About Professionalization?

Gerald Savage
Illinois State University

Underlying much of the thought and research on technical communication pedagogy are certain assumptions about what it means to be a professional in our field. Such assumptions necessarily inform course and program design, yet I would like to argue that these assumptions are too seldom made explicit because they have not been articulated clearly within particular academic programs nor within the field as a whole.

Most of us are concerned in various ways with defining the responsibilities of technical writers, with teaching the skills and concepts that will help our students fulfill those responsibilities, and with communicating to the managers of organizations in which our technical writing students are likely to be employed what proficiencies the graduates of our programs can bring to those organizations.

It is common for us to speak of technical communication as a profession, and from time to time we renew discussions of what an appropriate curriculum should look like (Moore 1997, 1996a, 1996b; Selber, Allen, Carliner 1992). Yet we have not yet set ourselves the task of exploring what it means to become a profession, how professionalization might be achieved, and what possible consequences might result from our achieving full professional stature.

Technical communication programs need more than pedagogical goals and they need to respond to social forces other than market conditions. The goals we set need to be developed in relation to a clear sense of the profession. Without a sense of the profession, our programs are likely to be driven by forces and agencies whose interests are not consistent with our own. To achieve this professional sensibility we should develop a critically informed awareness of how professions evolve. We might begin by taking account of the work of historians and sociologists of the professions. Historical and sociological studies indicate that professions tend to emerge in relation to the following factors (Burrage, Beckman):

1. Market demand for the expertise of the field.
2. The development of social status for the field in question.
3. Formal educational programs in the field.
4. Development of a professional consciousness.
5. Achievement of professional autonomy, accompanied by enforceable codes of conduct, certification, or other formalized standards of professional practice.
6. Achievement of power in relation to competing professions.
7. Practitioners tend to work for clients rather than for employers.

These are only a few of the factors affecting emergence of professions, but they suggest that while technical communication is making significant strides toward professionalization, it is not as yet a fully matured profession. I believe we cannot reach maturity without a clear understanding of professionalization as a historical process, including understanding the forces that drive the process and how we might consciously direct the professionalization of our field.

We should, at the same time, be discussing the social and political implications of professionalization, recognizing that, just as in such professions as medicine, law, and engineering, there are negative aspects as well as positive ones. We need to recognize that struggles within the field, such as the recent debate over instrumental discourse vs. rhetoric, efforts toward certification, and indeed, the multiplicity of concerns that enliven each meeting of CPTSC, are all aspects of the professionalization process. These struggles, economic, political, ideological, and technological in nature, respond to changes from outside the field as well as within it and can never be entirely in our control. However, by understanding the overarching historical process of professionalization we ought to be able to improve our chances of achieving professional stature, with advantages both for practitioners of technical communication and for the society our practice should serve.

Works Cited

Allen, Jo. "The Role(s) of Assessment in Technical Communication: A Review of the Literature." *TCQ* 2.4 (1993): 365-88.

Beckman, Svante. "Professionalization: Borderline Authority and Autonomy in Work." *Professions in Theory and History: Rethinking the Study of the Professions*. Michael Burrage and Rolf Torstendahl, eds. Newbury Park: Sage,

1990.

Burrage, Michael. "Introduction: The Professions in Sociology and History." *Professions in Theory and History: Rethinking the Study of the Professions*. Michael Burrage and Rolf Torstendahl, eds. Newbury Park: Sage, 1990.

Carliner, Saul. "What You Should Get from a Professionally Oriented Master's Degree Program in Technical Communication." *Technical Communication* 39.2 (1992): 189-99.

Hagge, John. "Ethics, Words, and the World in Moore's and Miller's Accounts of Scientific and Technical Discourse." *JBTC* 10.4 (1996): 461-75.

Kreth, Melinda, Carolyn R. Miller, and Janice Redish. "Comments of 'Instrumental Discourse is as Humanistic as Rhetoric." *JBTC* 10.4 (1996): 476-90.

Moore, Patrick. "Rhetorical vs. Instrumental Approaches to Teaching Technical Communication." *Technical Communication* 44.2 (1997): 163-73.

Moore, Patrick. "A Response to Miller and Kreth." *JBTC* 10.4 (1996): 491-502.

Selber, Stuart A. "Beyond Skill Building: Challenges Facing Technical Communication Teachers in the Computer Age." *TCQ* 3.4 (1994: 365-90.

Zimmerman, Donald E. and Marilee Long. "Exploring the Technical Communicator's Roles: Implications for Program Design." *TCQ* 2.3 (1993): 301-17.

Connections among Programs, Students, and the Workplace

Glenn Broadhead
Oklahoma State University

Understanding the job market (both as it is and as it may become) is a central concern for academic programs in technical communication—not only for faculty who must design relevant curricula, but also for students who must prepare plans of study that draw upon their strengths and that address their weaknesses in order to maximize their employment opportunities.

Of course, there are many resources for locating jobs in technical communication (e.g., stcjobsba-l, stcjobs, www.monster.com, ATTW-L, and others), and there are occasional articles about preparation for the workplace (e.g., David E. Hailey's recent piece, "What Do You Need to Be Needed?" in *Intercom* [December 1998], pp. 26-29). But there appears to be no ongoing, comprehensive analysis of the job market for technical communication, and hence of the profession's existing and emerging expectations and standards.

With the goals of both program development and student awareness in mind, I recently asked students in an introductory graduate course in technical writing to participate in an analysis of job listings for technical writers. While many of our MA students are graduates of our BA program, all of the students in this class were new to the field of technical communication as well as to graduate study. While each had shown considerable strengths as students and writers in order to be admitted into the program, they would need help in setting up and accomplishing such a project—especially if they were to accomplish the task as a group. However, I invited the students to participate in what I only half-jokingly called a "growth experience": they would approach the task as a group, making decisions on what they already knew about writing. I believed that, by struggling for a while with a project for which they had not been prepared, these promising students would become aware of the need to explore and develop a wide variety of skills during their ensuing studies. Normally, I believe in teaching a skill before I ask students to apply it (or be graded on it), but my preliminary analysis of job descriptions suggested to me that a temporary period of sink-or-swim would help make their needs more real to them—or at least more deeply felt. And in any case they would experience little more than the *feeling* of sink-or-swim, since I had no intention of letting anyone go under.

After giving each student a stack of 25 job announcements, I assigned their first task: to generate a taxonomy for analyzing the job requirements and preferences. Eventually, each of the eight students duly presented a taxonomy, and then for a while we just sat there looking at one another. Finally one of the students argued that we should accept her version, since it combined features of many of the others. Not long after, another student generated a counter-argument on behalf of her taxonomy, reasoning that it avoided the problems common to all of the other taxonomies. This repetitious and largely unfruitful discussion was brought to a conclusion when I (*deus ex machina*) said that we would use the taxonomy implicit in the list of topics for the course syllabus as a starting point, and would modify it as we went along to deal with exigencies that could not be predicted but that were certain to occur.

To begin the next phase, I distributed a data collection form on which students could enter the taxonomic information for each job announcement. I assigned two new tasks: (1) to enter data for 10 job announcements onto printed data-entry forms, and then (2) to transfer the information

into an *Excel* file (one row for each element in the taxonomy, one column for each job announcement). When we reassembled for the next meeting, we made several astonishing discoveries. One student had analyzed and recorded information for her 10 job announcements using her own alternative taxonomy, which she still felt to be superior to the other student-generated taxonomies and (God forbid) to mine; as a result, her efforts could not be included in the work of the group. Another student had re-designed her *Excel* data file to make it more attractive and usable, with blank lines and shading added for better visibility; as a result, we could not include her data in the summary statistics without considerable additional work to remove her formatting. Two other students had not completed the assignment due to a personal exigency and a job conflict, so that their data did not even exist. Thus, of the eight students, only four had completed the work in the prescribed format; as a result, our summary statistics were severely limited, we could not accomplish the tasks scheduled for that day, and our project appeared to be in a shambles.

As we took stock of our situation in a group discussion, some of the students were quick to recognize a lack of clear direction for the project. I agreed that my leadership had been minimal, and asked what they had learned from working under those circumstances. More specifically (I asked), in what ways had their strengths as individual students caused difficulties in working together as a group to accomplish a complex task? Clearly, we decided, cooperation was as important as initiative; consistency was as important as innovation; training and experience were as important as insight and intelligence; communication was as important as individual problem-solving.

I remain grateful to these students for suffering this manipulative pedagogy with grace and intelligence—and most of all, of course, for agreeing that the experience had helped them to *feel* as well as to understand the need to acquire new concepts and skills, building on and enhancing the various strengths which had gotten them into graduate school to begin with. At this point, we were able to return to our job analyses with renewed vigor, using a common taxonomy which we reviewed frequently to make it more manageable and usable, and also to make our analyses more consistent and reliable. Basically, the taxonomy asks a series of related questions:

- what is the job?
- what kinds of documents will be produced?
- what kinds of skills are needed to produce them?
- what kinds of tools are needed to exercise these skills?
- what personal qualities are helpful achieving the overall goal?
- what kinds of special knowledge are necessary?

Phrased as job features rather than questions, the taxonomy looked like this:

- **Job type:** (job title, location (city, state), employer, salary, duration (permanent, temporary, contract), status (full-time/part-time), benefits, required travel, telecommuting
- **Background requirements:** experience, degree, degree field
- **Genres:** brochure/ad, manual, online help, proposal, report, website, CD-ROM, multimedia
- **Tasks:** planning documents, managing document production (supervising staff, scheduling, budgeting), gathering information (interviewing, researching), generating

documents (developing/organizing information design, layout design, preparing graphics, drafting, editing, indexing), testing documents (usability, readability), publishing documents (desktop publishing, preparing documents for publication), creating/maintaining document standards, teaching, maintaining professionalism, webmastering, marketing, translating, using databases, documentation (tasks, products), wordprocessing

- **Tools (computer knowledge and skills):** platforms, software (wordprocessing, database, spreadsheet, web, communications, administration, graphics, help)
- **Work-related personal characteristics:** communication, cooperation, dependability, flexibility, good humor, independence, initiative, leadership, originality, teamwork, timeliness, other
- **Special areas of expertise:** marketing communication, DTP, medicine, computer hardware, computer software, computer or natural languages

Using this taxonomy, the students quickly generated data for 823 job announcements. Most of these were drawn from the stcjobsba-l, meaning that the data was highly skewed toward computer-related jobs in the San Francisco Bay Area.

When we examined the results of our efforts, we were first struck by the frequent lack of correlation between the **job title** and the actual **role** of the employee. For example, in some cases a job listed for a "technical writer" would specify only text-editing tasks or webpage design. Similarly, jobs listed for a "technical editor" might call for text-editing, publications management, or desktop publishing. As a result, we found it more useful to organize data by role than by job title.

In this limited survey, we found five general roles: (1) writer (text-generator), (2) editor (text-editor), (3) editorial manager (production supervisor or desktop publisher), (4) web designer (here called "webber" to save space), and (5) "trainer" (either an instructor or a developer of instructional materials) In some cases these roles were suggested by the job title (e.g., "editor/trainer"), while in other cases the roles were implied by tasks ("training employees"). Most of the job descriptions were oriented toward the "writer" role, so that percentages for "all" jobs are strongly influenced by percentages for "writers"; but in many cases the percentages for other roles differ very markedly from those for "writers." Because most of the jobs called for writers, a percentage for "all" job announcements generally echoes the percentages for "writer" job announcements.

Of course, not every job announcement mentioned every element in the taxonomy. But in examining the data to see what kinds of job characteristics were addressed, we were struck by the fact that job announcements mentioned competence with specific software even more often than experience (Table 1).

Table 1. Job Features Cited in Announcements of Positions (By Percent)

	writer	**editor**	**manager**	**webber**	**trainer**	**all**
Experience	68	46	53	41	68	63
Degree	17	0	7	12	11	14
Area	7	0	0	6	0	6
Genre	59	47	60	100	27	56
Computer platform	57	46	83	35	58	58
Software	80	69	90	94	53	79

The data in Table 1 is repeated (in boldface, underlined) in the top line of most of the subsequent tables, in order to establish a context for the data. In some of these tables, data items are mutually exclusive (e.g., the announcement specifies *either* "entry level" *or* "1-2 years" *or* "3-5 years" *or* "senior," but never more than one); thus, the boldfaced data will be equivalent to the sum of the data in the lower lines. In other cases, a single job announcement may specify two or more items (e.g., two or three types of software); thus, the sum of the lower lines of data may far exceed 100 percent.

As we examined the results of our analysis further, we were disappointed to read the background requirements listed in the job announcements, which did not much encourage graduate study in technical communication (Table 2). While 63 percent of the jobs (regardless of role) specified some period of years of experience, only 14 percent specified a degree. Of those, only 1 percent specified a degree beyond the BA, and only 1 percent specified a degree in technical communication. At the same time, we knew of STC data showing that technical communicators with MA degrees generally have a higher income than those with a BA. We therefore tentatively inferred that, while employers did not tend to seek out persons with advanced degrees, they tended to reward them when they found them. We also inferred that, during their graduate study, students may need to get as much experience as possible, developing a portfolio of projects in order to demonstrate the equivalent of workplace experience. For the same reason, we also recognized the market value of our program's required internship.

Table 2. Background (By Percent)

	writer	editor	manager	webber	trainer	all
Pct Citing Experience	**68**	**46**	**53**	**41**	**68**	**63**
entry	2	8	3	0	26	4
1-2 yrs	5	8	17	24	11	8
3-5 yrs	25	8	10	12	32	22
senior	36	23	23	6	0	29
Pct Citing Degree	**17**	**0**	**7**	**12**	**11**	**14**
BA	16	0	7	12	11	13
MA	1	0	0	0	0	1
Pct Citing Area	**7**	**0**	**0**	**6**	**0**	**6**
tech writing	1	0	0	6	0	1
English	4	0	0	6	0	3
journalism	5	0	0	0	0	3
rhetoric	1	0	0	0	0	1
computer science	1	0	0	6	0	1
other	3	0	0	6	0	3

In reviewing the data about **genres** (or document types) specified in the job announcements (Table 3), we could immediately recognize the impact of the computer-based source of our data (primarily stcjobsba-l), since there was very little call for expertise in print genres such as reports and brochures even for the writer role. At the same time, students could find ample reason to devise a plan of study that included our courses in manual writing, online documentation, and website production.

Table 3. Genres (By Percent)

	writer	editor	manager	webber	trainer	all
brochure/ad	4	8	3	0	5	4
manual	41	31	17	0	16	33
online help	29	15	30	12	11	26
proposal	2	0	13	0	0	3
report	10	0	7	0	16	9
website/multimedia	9	8	28	71	0	15

In addition to specifying a genre, job announcements also identified key tasks to be performed by the employee, and these varied substantially from role to role (Table 4). In some cases, the intersection of role and task is obscured by our method of coding the job announcements. By definition, for example, we would expect a "trainer" to be involved in "teaching," and we would expect a "webber" to be involved in "web designing." However, only 42 percent of the jobs for "trainers" specify "teaching" as a task, and only 7 percent of the jobs for "webbers" specify "web designing" as a task. These extremely odd results come from our (my) decision to base tasks (and all other job characteristics) on the job description, rather than on the job title. In other words, if a job announcement used the word "web designer" as the title of the job, then it usually

didn't bother to identify "web designing" as a task in the job description. In a follow up to the experiment reported on here, this discrepancy will be eliminated.

Despite its imperfections, the list of tasks offered the entry-level MA candidates a lot to think about in planning their coursework and other preparations for a career in technical communication. For example, the fairly large percentage of specifications for "gathering information" suggested the need to develop skills in bibliographic search methods and online information retrieval. The high percentage of web designer jobs that called for "assimilating new information" emphasized a need for students to learn how to monitor the development of new technology.

Table 4. Tasks (By Percent)

	writer	editor	manager	webber	trainer	all
Pct Citing Tasks	**70**	**87**	**84**	**82**	**67**	**73**
planning documents	16	8	17	24	11	16
managing production	12	8	30	18	0	13
analyzing audience	1	0	3	6	0	1
gathering information	18	0	13	12	16	16
generating documents	61	77	73	41	32	60
indexing documents	5	15	17	0	0	7
testing documents	9	15	17	18	5	11
publishing documents	18	15	43	12	16	21
maintaining standards	4	8	3	18	0	5
teaching	2	0	7	6	42	6
assimilating new info	2	0	7	24	5	4
web designing	6	0	8	82	0	10
marketing	0	0	0	12	0	1
translating	1	0	0	0	0	1
using databases	9	8	13	6	5	9
documenting	6	15	3	0	5	6

Even more importantly, students noted that tasks for writers and editors tended to bunch up around a few prominent activities, while the role of manager called for a much broader range of tasks. This was even more evident in more detailed breakdowns of these general tasks. For example, for managers, the task of "managing production" breaks down into "supervising staff" (20%), "scheduling" (13%), and "budgeting" (7%). Clearly, if the MA degree was going to justify an appointment beyond the entry level, then students must develop such administrative skills. On the other hand, details for the task of "generating" documents (Table 5) suggest a need for broad skills in all job types. That is, while the role of "editor" strongly emphasizes the task of "editing documents," other roles such as writer, manager, and webber call for competence in several tasks (e.g., the role of webber emphasizes design and graphics). In Table 5, the category of "general" indicates job announcements that mentioned the general task of "generating documents" but did not specify sub-tasks such as designing layout, drafting, or editing. Similar "general" categories also occur in subsequent tables.

Table 5. Specific Tasks in "Generating Documents" (By Percent)

	writer	editor	manager	webber	trainer	all
general	19	15	13	0	21	17
developing	18	8	20	29	5	18
designing layout	13	8	20	41	5	15
preparing graphics	8	8	17	18	5	9
drafting documents	19	8	20	24	0	17
editing documents	18	62	30	18	5	21

To accomplish these general and specific tasks, many of the job announcements called for knowledge of "tools"—i.e., of computer software and hardware. While most students were already familiar with the predominance of Windows over Macintosh, few were aware of the importance of the UNIX platform, which was specified by nearly a third of the jobs regardless of role (Table 6).

Table 6. Tools: Platforms (By Percent)

	writer	editor	manager	webber	trainer	all
Pct citing platform	**57**	**46**	**83**	**35**	**58**	**58**
Windows/95/NT	51	16	47	24	26	45
UNIX	30	31	33	12	32	30
Mac	7	8	33	6	0	9
Other	2	0	3	0	0	2
DOS	0	0	0	0	0	0

As with tasks, the specifications for software tools showed that manager roles called for the ability to use software for information management (i.e., databases)—as did many webber jobs, since many websites now incorporate information from databases. Also, many jobs for writers called for knowledge of programming and scripting; and HTML was a frequently-mentioned tool (Table 7).

Table 7. Tools: Kinds of Software Mentioned (By Percent)

	writer	editor	manager	webber	trainer	all
Pct citing software	**82**	**69**	**90**	**94**	**53**	**81**
document production	69	69	87	12	21	64
information management	12	0	30	24	11	14
graphics	4	0	10	35	5	7
online help	16	8	3	0	0	12
HTML/multimedia	25	8	20	88	16	27
programming/scripting	25	0	3	6	0	18
Internet (e.g., FTP)	3	0	3	0	0	3
not classified	11	0	17	6	11	11

In addition, students were impressed by variations in the number of software programs mentioned for a role. For example, fewer than one third of the jobs for editors specified more than one brand of software; but for the manager jobs, 80 percent of the announcements called for expertise with at least two brands of software (Table 8).

Table 8. Tools: Number of Software Programs Mentioned (By Percent)

Number of programs	writer	editor	manager	webber	trainer	all
0 programs	18	31	10	6	47	19
1 program	23	38	10	29	26	23
2 programs	19	15	43	24	21	22
3 programs	24	8	33	18	6	22
4 or more programs	16	8	4	24	0	14

In regard to specific software expertise required or preferred for a job, *FrameMaker* and *Word* are by far the most frequently cited software programs, and HTML is also required or preferred very often (Table 9).

Table 9 Tools: Specific Software Programs Mentioned (Percent in Parentheses)

writer	editor	manager	webber	trainer
FrameMaker (59)	*FrameMaker* (62)	*Word* (53)	HTML (71)	HTML (16)
Word (20)	*PageMaker* (23)	*FrameMaker* (47)	*PhotoShop* (35)	*FrameMaker* (11)
HTML (20)	*Word* (15)	*Excel* (30)	*Java* (24)	*Word* (11)
C (18)	HTML (8)	HTML (17)	*Illustrator* (18)	*Lotus Notes* (11)
RoboHelp (14)	*Quark Xpress* (8)	*PageMaker* (13)	*Director* (18)	*Illustrator* (5)
C++ (13)	*WinHelp* (8)	*Illustrator* (7)	*PageMaker* (12)	
Oracle (6)		*C* (3)	*Oracle* (12)	
PageMaker (5)		*RoboHelp* (3)	*PERL* (12)	
SGML (5)		SGML (3)	*FrameMaker* (6)	
Acrobat (4)		*PhotoShop* (3)	C (6)	
SQL (4)		*Interleaf* (3)	*Acrobat* (6)	
PhotoShop (4)		*FileMaker* (3)	*Sybase* (6)	
Java (4)			*CorelDraw* (6)	
Quark Xpress (3)				
WinHelp (3)				
Interleaf (2)				
Lotus Notes (2)				
Visual Basic (2)				
Excel (1)				
Sybase (1)				
Illustrator (1)				
McDraw (1)				
HyperHelp (1)				
***PERL* (1)**				
Hypercard (1)				

Finally, the students (and the teacher) were struck by the number of job announcements that mentioned desirable personal or professional qualities—especially for webbers. These data raised some interesting points for discussion. For example, a relatively high percentage of job announcements for webbers mentioned at least one desirable quality (Table 10). Does this reflect employers' frustration with web designers who had technical programming skills but little understanding of the teamwork required for document production in the workplace? And what about the apparent contradiction in the data: the two most frequently mentioned characteristics were "independence" and "teamwork." On reviewing the actual job announcements, we decided

that this apparent contradiction really revealed a problem with our application of the taxonomy—and with the taxonomy itself. That is, more often than not, what we called "independence" was really synonymous with "dependability"—the ability to complete a task without direct and continual supervision. Despite the puzzles and questions, however, this aspect of the job announcements ultimately had the most profound effect on the students. After all, upon examination, our initial experience with this whole effort to examine job announcements had shown the need for expertise in data collection, information management, and document design; but even more, it had shown a need for greater communication, cooperation, dependability, flexibility, timeliness, and (above all) teamwork.

Table 10. Qualities: Characteristics of Employees (By Percent)

	writer	editor	manager	webber	trainer	all
Pct Citing Qualities	**30**	**31**	**23**	**59**	**21**	**31**
communication	5	8	3	6	5	5
cooperation	6	0	3	24	11	7
dependability	1	8	3	0	5	2
flexibility	5	8	3	18	0	5
good humor	3	15	0	6	5	4
independence	13	15	7	18	5	12
initiative	9	0	7	12	5	8
leadership	6	8	10	18	5	8
originality	1	0	3	12	5	2
teamwork	12	15	3	29	0	11
timeliness	4	15	0	6	0	4

Based on the ultimately positive results of this classroom activity, I offered a proposal at the annual conference: that CPTSC form a standing committee to monitor job types and skills in technical communication. To achieve comprehensiveness, the committee would endeavor to engage students and/or courses in programs throughout the country in a cooperative effort to develop and maintain an analytical database based on this taxonomy. The primary goals of the discussion at CPTSC were (1) to review and improve the taxonomy, (2) to develop a means of pooling resources and data, and (3) to organize a CPTSC committee to coordinate this activity and make its results available to the profession.

While this proposal generated discussion, it did not generate action. As a result, in cooperation with the Career Services program and the Computer Information Services unit at Oklahoma State University, I have undertaken to establish a website (based on *Lotus Notes*) on which employers (or others) may post job announcements by entering data into online forms. These job descriptions will be freely available to students and other job-seekers. Over time, this job database (scheduled to be in place and web-accessible on February 1, 1998) will generate data for yearly analyses of job trends in technical communication. These analyses, in turn, may be used by faculty for curriculum review and by students for planning courses of study.

Programs, faculty, or students who are interested in coordinating regional participation in this database (and in developing yearly regional reports) are invited to contact me at bhead@okway.okstate.edu.

LITERACY AND TECHNOLOGY CONNECTIONS

The Challenges and Promise of Technology-rich Facilities: From Exploitation to Critical Practices

Dickie Selfe and Cynthia Selfe
Michigan Technological University

As much as we (the presenters) dislike the binaries set up in Sven Birkerts' The Gutenberg Elegies—refuse electronic connectionism or loose your sense of individuality—he is quite correct when he repeatedly asks, "What are we doing to our 'selves.'" The new communication technologies will no doubt have profound influence on our working and personal lives. While we do not take very seriously Birkerts' claim that communicators will loose their sense of uniqueness via some new virtual lifestyle, we do think Technical and Scientific Communication programs should take very seriously the social, intellectual, and fiscal impact that networked technologies will have on students, teachers, and programs.

Students in a 1995-6 questionnaire of technology-rich facilities gave many good reasons for their concerns about these facilities. Here are two:

1. they tend to have limited access to appropriate technologies and
2. their instructors have a tendency to add technical elements to courses without adequate consideration for the additional support and work those elements will necessitate.

Teachers expressed their own frustrations about access, training, time for planning, and technical support. They made clear how few incentives they received to explore risky educational experiments involving new technologies in their technical communication classes.

We are, in the long run, requiring both groups to engage in "addictive practices." That is, we are asking them to train on systems that become rapidly obsolete, that require constant upgrades and "fixes," that are seductive in most of the ways Birkerts suggests in his book.

How does our discipline talk about these technologies? We clearly have an intense interest in integrating communication technologies into our STC curricula. The technical communication literature frequently includes articles about networked collaboration software (Kaufer, et. al, 1993), computer-mediated communication technologies (Horn, 1993; Scholtz, et al., 1994), document design software (Scanlon & Coon, 1994), on-line help (Mirel, 1994), videoconferencing (Hildebrand, 1995), and hypertext and hypermedia (Selber, 1994; Smith & Nelson, 1994; and IEEE Transactions on Professional Communication, 1996). There are also technical communication textbooks that focus on the importance of microcomputers and networking (Pattow & Wresch, 1993; Lay et al., 1996). However, few of these publications mention, even in passing, the difficulty of establishing teaching environments that support such a wide array of communication technologies.

These facilities provide us with an opportunity to critically analyze the way communication technologies influence what and how we learn and teach. Together with all the stakeholders associated with technology-rich facilities, we should be able to develop collaborative literacy practices that will be directly applicable to the private and working worlds that we and our students experience.

This presentation is based on over 15 years of experience with technology-rich facilities as well as questionnaire research that began in the winter of 1995. Using both experience and data, we will first sketch out the substantial array of challenges that these facilities pose to students, teachers, technicians, and administrators in STC programs. Next, we will make the case that teams of critical practitioners-collectives of students, teachers, technicians, and administrators-can develop tactics for dealing ethically and creatively with this array of challenges . (More complete lists of challenges and tactics will be provided in hardcopy).

Connecting Research in Technical and Scientific Communication through the Internet

Don Payne
Iowa State University

Programs in technical and scientific communication should tap the Internet has a means of influencing research and scholarship. Although electronic publication, online discussion groups, and web-based course materials have developed quickly, academic programs have been much slower to establish sites for research on the Internet—not sites that publish research results but those that publish source materials and other catalysts for research. The social sciences in particular have recognized the value of standard data sets to spur research, to act as laboratories for sustained inquiry. Professional communicators, too, should not lose sight of this most basic element of research amidst the more high tech potentials of the Internet.

Much professional communication, from government documents to historical archives, is in the public domain, yet remains accessible only to those few scholars able to overcome the usual logistical barriers of geography, bureaucracy, and funding. Other materials now serving as fertile sources for research in one aspect of professional communication could, if available electronically, prompt research in other areas. Academic programs could play a key role by converting these materials into electronic databases and hypertext datasets and by consolidating them into well-organized web sites. Ideally, professional organizations like CPTSC might coordinate these efforts further, reducing duplication among programs, facilitating scholarly access to research materials at participating sites, and maintaining at its own web site documents related to its organizational history and to the broader history of technical and scientific communication. But even in the absence of such general coordination, individual programs with active research programs should recognize the benefits of establishing and maintaining their own research sites. These source materials will generate professional momentum. What additional insights might we gain if more documents from the Three Mile Island or Challenger disasters were available online? How much would the historiography of the field of technical and scientific communication be accelerated by online records from our academic programs and professional organizations? If we are to make the larger connections that advance our professional knowledge, then why not begin with the smaller connections, the source materials that we assemble document by document, person by person, program by program, organization by organization?

Tools for Scholars and Other Knowledge Workers: Connecting Computer Technology to the Curriculum

Pamela S Ecker
Cincinnati State Technical and Community College

The Internet and the World Wide Web are essential tools for production and distribution of knowledge in business and industry as well as at every level of academia. While most technical communication programs recognize the necessity of introducing students to the benefits and challenges of technology-assisted research, writing, and publication, implementation methods are varied. Also, implementation of technology-assisted curriculum initiatives requires special support, in the form of faculty training as well as through allocation of physical resources.

Concurrent with preparing this statement, I'm involved in three aspects of technology-assisted academic work: completing an experience as a graduate student in a seminar on academic uses of the Internet and the Web for research, teaching, and publishing (of scholarly Web sites); monitoring the teaching of a course for undergraduate technical communication majors on designing and producing multimedia products (including Web sites); and planning ways to integrate additional elements of technology-assisted teaching and learning into undergraduate curricula in English, technical communication, and "general computer literacy." The last task includes a review of currently-available textbooks for "Internet courses."

In my CPTSC presentation, I will briefly describe the curriculum development activities noted above, present some tentative conclusions, and then invite participants to engage in informed discussion of these issues and concerns:

- Should Internet/Web research, writing, and production skills be addressed as a one unified topic (as many of the new "Internet course" textbooks purport to do), or integrated into a variety of courses?
- As the ability to produce technology-assisted writing (including designing and producing Web sites) becomes more significant in an increasingly wide range of workplace environments, are there reasons (disciplinary/pedagogical/political) to distinguish between technology-assisted research and writing skills for technical communication majors and for non-majors? If so, what are the distinctions?
- Similarly, are there factors that do or should distinguish hierarchical levels of knowledge and skill for technology-assisted research and writing? Do categories such as undergraduate and graduate, or novice, intermediate, and advanced make sense in disciplinary, pedagogical, and/or political frameworks?
- What credentials and experiences should faculty members bring to technology-assisted teaching? Is there a "best way" to prepare current and future faculty for effectiveness in designing and implementing technology-assisted teaching?

Although these questions can be viewed as discreet items of concern, they inevitably become connected during efforts to design and implement effective curricula. Expanding curricula to incorporate new technical tools skills, while continuing to address basic skills, is a perpetual dilemma for curriculum designers, and the dilemma seems to grow more complex with each new "essential" technology that enters into our consideration. By focusing attention on these issues, perhaps we can elucidate new connections to good solutions for our programs and our students.

Securing Employment by Navigating Cyberspace? Raising Questions for Technical Communication Programs

Tim Fountaine
California State University, Chico

Preparation of job application materials is a typical component of technical writing courses. As more writing instruction takes place in computer supported environments, it follows that writing programs will be expected to equip students to enter job markets rapidly expanding into cyberspace. Students desiring to position themselves favorably now may take networking to unforeseen places, from securing references via email and surfing for prospective employers to making elaborate personal introductions through web sites complete with Technicolor graphics, video clips, and digitized sound. Such capabilities for the delivery and design of job materials may seriously erode the value of conventional advice technical writing textbooks offer, for example:

- [D]o not pinch pennies when you create a resume (Oliu, Brusaw, and Alred 467);
- "[G]ive the title and full business address for each of your references. . . . It's a good idea to give phone numbers. . .because many employers would rather call references than write to them" (Anderson 44);
- It is the basis for their decision to invite you for a job interview. It tells them who you are, what you know, what you can do, what you have done, and what your job objectives are (Brusaw, Alred, and Oliu 195);
- Research the companies you are interested in. Write to them for information. Scan the index of the Wall Street Journal for articles. Study their annual reports, many of which are collected in your college library (Markel 472);
- Use all your knowledge about document design when you plan your resume (Lay, Wahlstrom, Doheny-Farina, Duin, Little, Rude, Selfe, and Selzer 625);
- Visual markers are extremely important. . . .Use boldface, underlining, and/or italics to set off the important facts (Boiarsky 44).

Much of the advice given for producing paper resumes does apply well to web versions, but developments in cyberspace have clearly outpaced publishers' abilities to respond with appropriate pedagogical tools. Typically, a functional orientation dominates in textbooks that attempt to address the issue. For example, Lannon's seventh edition of Technical Writing provides a one-page briefs on electronic job hunting (487), with recommendation to prepare hard copy and scannable versions of resumes.

New editions of tech com textbooks will undoubtedly discuss job searching on the web more fully. But while teachers wait for that curricular assistance, as representatives of technical communication programs we probably should consider how electronic delivery systems change what we teach students about preparing for and instigating a job search. Here are a few questions:

- What are some of the social, legal, and/or ethical issues an updated unit on the job search ought to address in a technical writing course?
- What components of lesson plans currently in use should be retained? Amplified? Modified (and how)?
- What are some of the implications of applicants and employers being able to see more of each other than ever before without the benefit of a face-to-face meeting? enables many more people to apply for jobs
- Does it make sense to compare developing web pages to building a portfolio? What benefits and pitfalls does that set up?
- In what ways (if any) might internet access influence expectations—real or perceived—to demonstrate skills to prospective employers in order to compete for jobs? e.g., larger applicant pools
- What are the implications (e.g., privacy, discrimination, and copyright issues) of placing personal information such as addresses, telephone numbers, hobbies, awards, professional affiliations, etc. into a public forum? What about photographs, which are fairly standard now on web pages? Information about references? Obtaining permissions to include samples of work done for hire?

Works Cited

Anderson, Paul V. Technical Writing: A Reader-Centered Approach. New York: Harcourt, Brace, Jovanovich, 1987.

Brusaw, Charles T., Gerald J. Ared, and Walter E. Oliu. The Concise Handbook for Technical Writing. New York: St. Martin's P, 1996.

Boiarsky, Carolyn R. Technical Writing: Contexts, Audiences, and Communities. Boston: Allyn and Bacon, 1993

Lannon, John M. Technical Writing. Seventh ed. New York: Longman, 1997.

Lay, Mary M., Billie J. Wahlstrom, Stephen Doheny-Farina, Ann Hill Duin, Sherry Burgus Little, Carolyn D. Rude, Cynthia L. Selfe, and Jack Selzer. Technical Communication. Chicago: Richard D. Irwin, Inc., 1995.

Markel, Mike. Technical Communication: Situations and Strategies. Fourth Ed. New York: St. Martin's P, 1996.

Oliu, Walter E., Charles T. Brusaw, and Gerald J. Alred. Writing that Works: How to Write Effectively on the Job. Fifth Ed. New York: St. Martin's P, 1995.

Synthesizing Technical and Critical Literacies: A Curriculum for the Class of 2001

Craig Waddell and Dale Sullivan

Michigan Technological University

A university education should prepare students not only to be efficient technicians, but also to be good corporate and public citizens. However, as the demand for technical skills increases, we risk crowding more-traditional, critical-thinking skills out of the curriculum. This dilemma is not new. Twenty-four hundred years ago, philosophers charged the sophists with providing their students with only a narrow, technical education in the means of persuasion; in the nineteenth century, Matthew Arnold and Thomas Huxley debated the pros and cons of a humanistic versus a scientific education; and in 1959, C.P. Snow renewed this debate with his lectures and subsequent book on "the two cultures." Each generation makes its own attempt to accommodate technical and critical skills in its curricula.

This paper describes attempts to synthesize technical and critical literacies in the Scientific and Technical Communication curriculum at Michigan Tech. It presents the various strategies and tactics proposed for meeting this goal, it describes problems encountered or anticipated, and it discusses attempted or proposed solutions to those problems.

INDUSTRY CONNECTIONS

Hiring Those Who Can and Do and Teach: The Faculty Connection to Workplace Practices

Louise Rehling,
San Francisco State University

Despite the allusion in my title, I know, of course, that good teachers (including technical communication teachers) are not, as Shaw would have it, failed practitioners, but, rather, successes in the classroom. I respect that teaching is itself a doing, one which both complements subject matter knowledge and requires it. However, that last bit-the need for up-to-date subject matter knowledge in a very specialized, rapidly changing, applied field-leads me to advocate hiring active industry practitioners as technical communication course instructors, given appropriate circumstances and support. Such faculty can provide the ultimate industry connection.

I will only summarize the familiar positions in a long-standing debate: Those who favor hiring practitioners as technical communication faculty articulate clear benefits: direct knowledge of current practice, access to "real world" samples, sensitivity to non-academic cultures and institutional issues, familiarity with prevalent tools, and credibility with students. Those who question the practice, or who have tried it and experienced disappointment, also argue strong reasons for their stance. Lack of teaching skills is often the first among them, but insufficient depth and range, lack of grounding in theory and in related subject matters (such as composition and rhetoric), and unfamiliarity with relevant scholarly research count heavily, as well. There also may be political and practical limitations to hiring outsiders in departments with internal applicants.

Weighing these factors (presumably with no rare, "has it all" candidate available), the first question for a program director becomes: why value industry experience over academic? The nature of our program helped us to decide: Our curriculum does not include service courses, but a core focused exclusively for students aiming toward writing careers, so we primarily need up-to-date specialists with networking connections. Also, we do not offer a graduate degree, which might require more emphasis on research, and we are not in a department with teaching fellows to support. Finally, we have many non-traditional students with workplace experience, and that raises expectations for instructors to have the same.

For others whose circumstances also bias them toward practitioner hiring, though, a second question remains: how to retain the benefits claimed by proponents (which our program has, indeed, experienced), yet also offset the predictable drawbacks? I am discovering some ways to help ensure relevant teaching skills and knowledge: One is to prefer lecturer candidates with at least a Master's degree, and so some past familiarity with scholarly research (no matter the discipline). We also look for some experience with corporate training. Another is to devote time, energy, and resources to teacher training and oversight: jointly developing syllabi and assignments, coaching on instructional methods, classroom observations, mid-course student assessments, course de-briefings, and faculty support meetings. Yet another is to develop a lending library of research materials and example documents for faculty use, to help them to extend their knowledge base. For that last purpose, we prefer candidates active in professional associations, as well.

Of course, hiring decisions need not be either/or. Co-teaching is also an option; and other techniques from guest speakerships to faculty internships also can connect course work to workplace realities. The strongest, most informing, and most successful solution I have found, though, is hiring practitioner faculty. That is why I encourage other program directors to seek out technical communication do-ers, and to help them to become teachers, too.

Advisory Boards for Academic Programs: Results of a Survey

Kenneth T. Rainey
Southern Polytechnic State University

In a profession that is inextricably tied to industry and business, it seems necessary that academic programs pay attention to the demands imposed upon them by those who will hire the graduates of technical communication programs. Those of us in academic departments of technical communication are preparing students who can deliver the documents that industry and business require for their success. In order for us to prepare them adequately, we need the advice of industry representatives about the content of our required and optional courses of study.

I explored the usefulness of academic-industry advisory boards who counsel programs in technical communication about their programs and courses of study. Specifically, I examined

- the kinds of advice that such boards can and should, appropriately offer
- the composition of the boards (determined, of course, by the focus of the industry and business in the area served by the program)
- meetings, agenda, and management of the boards

Also, I asked questions about

- why or why not programs use advisory boards
- the programmatic considerations for using or not using advisory boards
- the philosophical and practical considerations for using or not using advisory boards

The survey was conducted via Email and through personal contact, so it is not a statistically random sample but a convenience sample. I received responses from 30 institutions representing 73 academic programs (see Appendix). Of the 30 institutions, 19 do not have advisory boards and 11 have advisory boards for their programs (see Tables 1 and 2). Table 3 includes the numbers of student enrolled in various programs in the responding insitutions.

This survey of academic-industry advisory boards for academic programs, follows up on a broader survey I conducted in 1995 that included questions about

- the number of academic programs that have academic-industry advisory boards
- the use that these programs make of advisory boards
- the advantages and disadvantages of academic-industry boards
- the management of the boards, including meetings and agenda (Rainey, 1995)

Rather than interpret the data for you, I leave it to you to come to your own conclusions. However, it is interesting that no one offered any philosophical objections to the idea of academic-industry advisory boards. Also, it is informative that several programs who do not use advisory boards feel that other connections, such as faculty consulting and student internships, provide the insight and advice that they need to inform their programs about industry needs.

Table 1. Institutions Without Advisory Boards: Type, Size, Number of Instructors (Number =19)

Institution	Type 1	Type 2	Size	No.Instructors
Auburn U.	4-yr research	comprehensive	20,000+	10-15
Carnegie Mellon	4-yr research	comprehensive	1-4,000	1-5
U. Colorado (Denver)	4-yr research	comprehensive	4-10,000	1-5
U. Delaware	4-yr research	comprehensive	20,000+	1-5
East Carolina U	4-yr research	comprehensive	10-20,000	5-10
Eastern Mich.	4-yr coll/univ	comprehensive	20,000+	1-5
Georgia St. U.	4-yr research	comprehensive	20,000+	1-5
Iowa St. U.	4-yr research	comprehensive	20,000+	20+
U. Memphis	4-yr research	comprehensive	20,000+	5-10
U. North Texas	4-yr coll/univ	comprehensive	20,000+	1-5
N. IL SU.	4-yr research	comprehensive	10-20,000	1-5
Miami U.	4-yr research	liberal arts	10-20,000	1-5
NM State U.	4-yr research	comprehensive	10-20,000	20+
U. New Mexico	4-yr research	comprehensive	20,000+	1-5
Purdue U. (Calumet)	4-yr coll/univ	comprehensive	4-20,000	1-5
San Francisco SU	4-yr coll/univ	comprehensive	10-20,000	1-5
U. Tenn (Knoxville)	4-yr research	comprehensive	20,000+	5-10
SE MO SU	4-yr coll/univ	comprehensive	10-20,000	1-5
Texas Tech. U.	4-yr research	comprehensive	20,000+	1-5

Table 2. Institutions With Advisory Boards Type, Size, Number of Instructors of (Number = 11)

Institution	Type 1	Type 2	Size	No.Instructors
Austin CC	2-yr	comprehensive	20,000+	1-5
Cal. St. U. (Fullerton)	4-yr research	comprehensive	20,000+	1-5
Cincinnati S Tech	2-year	comprehensive	4-10,000	1-5
U. Houston (Dwn)	4-yr coll/univ	technical	4-10,000	5-10
James Madison U.	4-yr coll/univ	comprehensive	10-20,000	5-10
Metropolitan. SU	4-yr coll/univ	comprehensive	4-10,000	1-5
Mich. Tech U.	4-yr research	technical	4-10,000	5-10
U. Minnesota	4-yr research	comprehensive	20,000+	5-10

Oklahoma SU.	4-yr research	comprehensive	10-20,000	1-5
PA Coll. Tech.	4-yr coll/univ.	technical	4-10,000	1-5
South. Poly. SU.	4-yr coll/univ.	technical	1-4,000	5-10

Table 3. Number of Institutions with Numbers of Students Enrolled in Various Programs (total responses = 54)

Program level	less than 25	25 to 50	50+
Certificate	1	7	
Associate	1		
Bachelor's	1	10	8
Master's	1	15	1
Doctor's	8	1	

No response: 19

Works Cited

Rainey, Kenneth T. "What We Can Assume About Academic Programs in Technical Communication." *Proceedings*. 42nd STC Annual Conference. Arlington: Society for Technical Communication (1995): 40-43.

Bibliography

Teitel, Lee. *The Advisory Committee Advantage: Creating an Effective Strategy for Programmatic Improvement.* ASHE-ERIC High Education Report No 1. Washington, DC: The George Washington University, School of Education and Human Development, 1994.

APPENDIX

ADVISORY BOARD SURVEY RESULTS

1. Number of responses: 30 institutions representing 73 programs

Auburn University
Austin Community College
California State University (Fullerton)
Carnegie Mellon University
Cincinnati State Technical and Community College

University of Colorado at Denver
University of Delaware
East Carolina University
Eastern Michigan University

Georgia State University

University of Houston (Downtown)
Iowa State University
James Madison University
University of Memphis
Metropolitan State University

University of North Texas
Northern Illinois State University
Miami University
Michigan Technological University
University of Minnesota

New Mexico State University
University of New Mexico
Oklahoma State University
Pennsylvania College of Technology
Purdue University (Calumet)

San Francisco State University
University of Tennessee (Knoxville)
Southeast Missouri State University
Southern Polytechnic State University
Texas Technological University

2. **Number of programs without advisory boards** 19

Number of programs with advisory boards 11

Note: Number without advisory boards includes several with two caveats:

- Planning an advisory board
- Other connections with industry fulfill need

3. **Degree / programs offered**

AAS	2
BA	19
BS	11
MA	15
MS	5
PhD	9
Certificate	10
Minor	2
Total	73

4. Where programs are housed:

Within another dept / unit	22
Within own dept / unit	8

5. Chief reasons for not having an advisory board:

PHILOSOPHICAL: No respondents offered any philosophical reasons for not having an advisory board

PROGRAMMATIC / PRAGMATIC:

- Not politically healthy; sensitive set-up
- History, precedent
- Haven't energized to do it; requires us to organize and implement it (so mostly a time issue); new and haven't had a chance yet to form one
- Other programs provide contact with industry and serve the purpose
  - Ã Small number of students and frequent consulting handles needs
  - Ã Internship sponsors help shape program
  - Ã Industry partnership program
  - Ã Information exchange day
- No released time / no reward
  - Ã Too much trouble; too little benefit
- City lacks sufficient large industry to provide members
- No institutional need yet

6. Primary reasons for having the advisory board:

- Provide internships and jobs for students (providing networking for students)
- Advise on appropriateness of curriculum for current workplace (keeping abreast of changes in workplace: gaining knowledge about industry needs)
- Provide opportunity to influence changes it the workplace
- Provide funds (help justify program requests—financing and new courses—to the admin.)
- Have industry experts in the classroom
- Encourage industry-university research for graduate students
- Required by college policy
- Propose strategies for marketing
- Support efforts in outreach to the professional community
- Training of instructors
- Keep graduates involved with program
- Keep lines of communication open between program and other collaborating programs on campus and organizations off campus
- To maintain continuity in faculty evaluation and promotion

7. Members from the industrial or business sector?

YES 10 NO 0 N/R 1

8. Membership from outside institution's immediate geographical area:

YES 3 NO 7 N/R 1

9. Total membership:

Number of academic members: Mean: 3+
Number of business/industry members: Mean: 6+

10. Frequency of meetings:

- Once a year 5
- Twice a year 5
- Every other year 1

11. Management/chair:

Academic	8
Co-chair from Academic and from Industry/business	2
N/R	1

12. ADVANTAGES in having an advisory board:

- Gives credibility to program (keeps programs current and sensitive to the needs of industry; provides majors with greater trust in faculty and the program's connection with what is actually needed in the workplace)
- Keeps faculty abreast of industry needs
- Provides internships and jobs for students

13. PROBLEMS in having an advisory board:

- Scheduling meetings (arranging time)
- Getting active involvement of members (attendance at meetings)
- Soliciting new members
- Don't have defined terms of office (turnover doesn't happen as often as needed)
- Sometimes goals of industry members are at odds with those of the academic members; but this is to be expected and encouraged, allowing all members to find a middle ground

University Programs Working in Collaboration with Professional Organizations

Christine Abbott
Northern Illinois University

Increasingly, technical communication programs look to internships and to partnerships between academe and business or industry as important ways of bridging the gap between school and the workplace and, hence, of improving the quality of technical communication programs. This presentation describes the benefits of another type of partnership, or affiliation, which may be of potential interest to other program directors: that of a university, specifically the Department of English at Northern Illinois University (NIU)--and a professional organization, specifically the Chicago Chapter of the Society for Technical Communication (hereafter CCSTC). Before turning to the advantages, however, a bit of background on this affiliation—

About two years ago, some members of the CCSTC Education Committee proposed an STC Institute for Professional Development to address the interests of both entry-level and experienced technical communicators by offering courses not available in existing, traditional venues (e.g., academic courses, corporate training programs, or vendor workshops). Now in its pilot year, the Institute is offering two courses: a fundamentals course and an advanced topics course. Each course consists of a series of workshops based on theory and practice from both an academic and a corporate, organizational perspective. For the duration of the course, each participant has the advantage of working with both a mentor from business and industry and the course coordinator, a university professor (currently me), on a project of the participant's choice. At the end of the course, participants give oral presentations explaining their projects to peers and invited guests. Participants, who enroll through NIU, may take the course for credit (undergraduate or graduate) or no credit, or for Continuing Education Units (CEUs). The first course, Fundamentals of Technical Communication begins 21 March

1998. The second course, Special Topics in Technical Communication, is planned for fall 1998.

Upon completion of the first course, the Institute Committee will assess the program and make recommendations. In the meantime, however, we anticipate that the most important advantages of this affiliation are the integration of theory and practice; the conservation of resources; and the rich networking opportunities.

- Integration of Theory and Practice. Each course is designed and taught by a team of both university professors and workplace professionals with expertise in each specific workshop topic. Emphasis is upon applying principles and theories of technical communication drawn from both research and practice. All of the university professors have consulting or corporate experience, and in addition the course coordinator is a tenured associate professor in the Department of English and therefore committed to helping ensure the Institute's success and to providing continuity across course modules.

Conservation of Resources. Like many other academic institutions, NIU is undergoing budgetary recisions that have curtailed the number of full-time professorial positions. In the field of technical communication, it is difficult to find adjunct, part-time faculty who have both (a) the professional, workplace experience necessary to keep abreast of technological and

organizational change, and (b) the academic qualifications, namely a Ph.D., required to teach our upper-level undergraduate and our graduate courses. The Institute model—with its emphasis upon a course coordinator/professor working in collaboration with a team of workplace professionals selected for their expertise—helps solve this problem. The CCSTC benefits, too, because it can rely upon the university for keeping course tuition low (about half that of the tuition charged by private vendorsoffering workshops) and for handling all registration and records.

Opportunities for Networking. Participants are exposed to individuals with diverse backgrounds and experience: some working on undergraduate or advanced degrees, others working in business and industry, and some doing both. The professional technical communicators and mentors represent a spectrum of industries and jobpositions. They benefit not only from meeting each other and learning more about other aspects of the profession, but also from meeting faculty who are familiar with the scholarship in technical communication. Furthermore, the faculty members benefit by making new connections in the corporate world, which may lead to internships, jobs, or research projects for their students or for themselves.

As any of the Institute Committee members will attest, developing the Institute was much more complicated and time consuming than we anticipated. However, nowthat the first course is underway and there is a long waiting list of individuals interested in taking the course, we are convinced that the effort was well worth it. At next year's CPTSC, I hope to give a progress report that will focus on recommendations for those thinking of developing a similar program. In the meantime, please feel free to contact me or any of the other members of the Institute Committee.

Chicago Chapter Society for Technical Communication
Institute for Professional Development

Institute Committee Members:

Christine Abbott cbabbott@aol.com
Alex Kantas commskills@aol.com
Mary Ryba Knepper jknepper@ix.netcom.com
Gina Meyers 102752.2251@CompuServe
Anna Miller akmiller88@aol.com

Christine Abbott
Associate Professor of English
Northern Illinois University
Department of English
DeKalb, Illinois 60115

Industry Partnerships in Usability Testing

Carol Barnum
Southern Polytechnic State University

A mere five years ago, the mention of usability testing might have resulted in a quizzical response of "what's that"? It certainly was a hot topic at the STC annual conference that year, with most people saying they were attending sessions to learn what usability testing was or because their company was thinking about getting into it, whatever "it" was.

Now the subject is recognized as an important part of product and documentation development, it is a thriving SIG (Special Interest Group) in STC, and it is taught as part of a course or courses in growing numbers of technical communication programs. In the few short years since the first books appeared on the subject (Dumas and Redish, Rubin), dozens of books are now available. Industry pays good salaries for people with experience in usability testing, and they seek such people from a growing number of fields, including technical communication.

Clearly, where there is a need in industry for people who understand the concepts of usability testing and can apply them, there is an opportunity for industry and academe to cooperate. And they do: with models that range from Georgia Tech's partnership program with industry affiliates (annual donations starting at $20,000), to The University of Washington's LUTE lab, which is a single-person operation that works on individual projects as part of university research grants and other sources, to the model at Clemson University, which uses the English Department as the external validation lab for one company's products.

At Southern Polytechnic, we do something different from these other models, in that we establish partnerships with a few companies, in which we form teams composed of our students and their developers. Using this concept, our graduate students (who have completed the course in Usability Testing) are hired to work in partnership with one or more team members from the partner company to write, develop, conduct, and analyze the results of a usability test. The team also establishes the user profile and recruits the participants, if appropriate, from the student population. Participants are paid for their time, as are the Southern Polytechnic graduate students. I am the team leader, serving as project coordinator and primary contact with the industry partner. The "surplus" funds resulting from the test are placed in a usability account that maintains the lab and provides equipment upgrades.

Our lab, originally funded several years ago as part of an IBM Total Quality Management grant, is a state-of-the-art facility with one-way mirror between the evaluation room and the observation room, three cameras, a tape recording and editing studio, and so forth; but this type of lab is not needed to do excellent usabilility testing. As both Dumas/Redish and Rubin explain in their books, any room with evaluators sitting off to the side, using stop watches and note pads, can work quite well.

The benefit to be derived from industry cooperation is that students get to work with real companies on real products, which makes them even more marketable in the usability field. The companies get a partial discount from working with a university (and the tax advantages that derive from this relationship), the instructor keeps current on the real problems and challenges in usability testing (beyond what any book can demonstrate), funds are generated to provide needed

maintenance and equipment where no line item exists in a university budget, and, the bottom line, improved products result from the testing.

Works Cited

Dumas, Joseph S. and Janice C. Redish. A Practical Guide to Usability Testing. Norwood, NJ: Ablex, 1993.
Rubin, Jeffrey. Usability Testing. New York: Wiley, 1994.

Connections in Technical and Scientific Communication with Workplace Environments: Beneficial Partnerships that Neither Side Can ignore

Mohsen Mirshafiei,
California State University, Fullerton

A decade ago, I designed a 1 2-unit certificate program in technical writing for California State University, Fullerton. The program has been very productive and successful. Many of our graduates have become very successful technical writers.

A year ago, we realized that we needed to strengthen our connections with workplace environments by establishing a direct partnership with the industry and business communities we serve in our area. For this purpose, we created an advisory board for our technical writing program. Our advisory board includes several of the outstanding technical communicators who work in industry and business, as well as the dean of extended education and the coordinator of the program.

The partnership that we have established between our technical writing program and workplace environments through our advisory board offers many mutual benefits that neither academia nor industry and business can ignore.

Members of our advisory board outline industry and business needs. They also fund the instructional cost of many of their employees who take our technical courses. In addition, the advisory board acts as a reliable source for instructor recruitment, and facilitates internships for our students. Several of these internships have already become full-time positions for which our graduates have been hired. The board also helps our students to find jobs after they graduate.

In return, we make sure that in our instruction we pay special attention to the current and the future needs of industry and business, and train our students according to those needs. As a result, we have become a reliable institution that supplies industry and business with well-prepared technical communicators.

CURRICULAR CONNECTIONS

Adding Value to the Technical Communication Program: The Need for Required Research Methodology Courses

Elizabeth Pass
James Madison University

Thomas Kuhn, in The Structure of Scientific Revolutions, says that for an academic discourse community to be considered a discipline it must have an agreed upon set of methodologies it employs. It is my contention that the technical communication programs, especially at the graduate level, do not require enough (if any, in many cases) research methodology courses. The knowledge of a discipline's research methodologies is vital to the perceived value of that discipline.

Of the doctoral programs in technical communication currently being offered, 50% of them do not require any research methodology course. Of the masters programs in technical communication currently being offered, over 60% of them do not require any research methodology course. This lack of rigor in such an important aspect of technical communication can only be detrimental.

In order for the discipline to advance and build its body of knowledge, its members must not only be familiar with its research methodologies but also be able to accurately apply research in their own work. And if the system that educates its members does not rigorously educate them in the discipline's commonly used methodologies, the discipline will fail to effectively build on its body of knowledge and will suffer in its reputation as a valued discipline from other academic programs and the public sphere.

Also, without educating researchers in the field of technical communication in research methodology, individual researchers, departments, and universities will lose important funds for research. Decreasing funds for research can be hazardous for a department and its members: recruiting, reputation, publications, and future funding will be affected. Until doctoral and masters technical communication programs require research methodology courses as a part of every student's education, the status and value of technical communication as an established and respected discipline can be questioned.

Can We Resolve the Visual Analysis Dilemma in Document Design Curricula?

Brian Pedell,
Federal Express Corporation

Until recently, document design components in scientific and technical communication curricula have emphasized the development of verbal communication skills to the detriment of those required for effective visual communication. Whereas students traditionally enter document design courses with previous composition training they can apply to the analysis of scientific and technical discourse, they are much less likely to have been given comparable training in visual design analysis. In light of the rapidly increasing demand for more graphically oriented multimedia presentations of scientific and technical information, technical and professional communication educators have begun to place greater emphasis on visual analysis and production skills in their document design courses. However, as much attention as we seem to devote to these skills, we appear to get no closer to resolving a difficult dilemma: How do we provide students with a sound theoretical background in visual design and analysis when it is virtually impossible to keep up with the rapid development and evolution of highly sophisticated software and hardware tools for creating visually complex multimedia presentations? Should we simply choose to emphasize graphic design and production skills in the classroom in an attempt to keep students current with the rapid technological advances being made in the multimedia domain? Or do we try, at least, to provide students with a theoretical foundation that will ultimately aid them in their development and critical assessment of visuals? It would be difficult to imagine how to accomplish both goals short of creating a concentration or complete program devoted to multimedia document design. Whatever solutions or approaches we choose to implement, we should not overlook that the tools available to us are only as valuable as our understanding of how they can be used most effectively.

The Connection of Risk Communication, Technical Communication, and Civic Discourse: Programmatic Problems and Possibilities

Jeffrey T. Grabill,
Georgia State University

In his discussion of the history of technical communication, James Souther asserts that the profession of technical communication has been broadened by "three mandates requiring effective communication of technical information to the public": environmental legislation, the consumer movement, and the emergence of the personal computer (qtd in Waddell). While the first two involve risk communication, there has been little examination of risk communication as technical communication, yet risk communication constitutes perhaps the most complicated and arguably the most important form of technical communication: the communication of technological risks associated with public decision-making about those risks.

In an often parallel development, others have discussed the possibilities of technical communication as either socially responsible, a civic discourse, or similarly, a "practice" (e.g., Sullivan; Slack, Miller, & Doak). It seems that the two impulses intersect in risk communication, as risk situations constitute moments in which technical communication is always already social, civic, and political. To take both arguments seriously, (1) that communicating risks is indeed a form of technical communication, and (2) that technical communication is a social practice poses a set of problems for program development in technical communications. Stated simply (perhaps overly so), such an articulation of technical communication begs questions related to the identity of technical communications (i.e., who is the technical communicator who is also a risk communicator) and the curriculum that should follow.

In my presentation, I will discuss the development and use of a risk communication case within the context of a larger professional writing program. Such a presentation will hopefully raise issues related to both risk communication and civic discourse. In addition to the largely theoretical problems and issues posed earlier in this proposal (which will lurk mostly in the background), I am interested in discussing

- ? how can risk communication fit into technical communications within English departments (as opposed to its connections to public relations in communications departments)?
- ? if risk communication fits, what other programmatic pieces should be in place (e.g., internships; additional coursework in research practices, particularly an expanded notion of usability/audience research)?
- ? what are the best ways to foreground risk communication within a program (I have chosen a case, a pedagogical practice with benefits and problems)?

My hope is to make more concrete the positive discussions of technical communication as a social (and political) practice through the very important practices of risk communication. Furthermore, my hope is to help generate discussion related to the programmatic/curricular design necessary to help construct the technical communicators capable of participating in such technical/civic discourse.

References

Slack, Jennifer Daryl. David Miller, and Jeffrey Doak. "The Technical Communicator as Author: Meaning, Power, Authority." Journal of Business and Technical Communication, 7.1 (1993): 12-36.

Sullivan, Dale L. "Political-Ethical Implications of Defining Technical Communication as a Practice." Journal of Advanced Composition 10 (1990): 375-386.

Waddell, Craig. "Saving the Great Lakes: Public Participation in Environmental Policy." Green Culture: Environmental Rhetoric in Contemporary America. Ed. Carl Herndl and Stuart Brown. The University of Wisconsin Press, 1996. 141-165.

Service Courses Don't Have to be Servants Anymore: The Role of Environmental Communication in the Technical Communication Classroom

Hillary Hart
University of Texas at Austin

Those of us who teach so-called "service courses" in Technical Communication to undergraduate scientists and engineers (and pharmacists and city planners and . . .) have for a long time felt like much-needed but second-class citizens. If our courses are judged successful, they are valued for their skill-building rather than their content. And even then, we must first convince our students that they **need** to develop skills in writing and speaking and collaborating before we can help them demonstrate for themselves how to turn the technical data in their field into information usable by a variety of audiences. And heaven forbid that we try to ram any communication "theory" down their throat in the process. But recent developments in the environmental consciousness of the American public (and, therefore, of government and industry) may have changed forever the way technical professionals can afford to regard the necessity of communication, especially with the general public.

With growing awareness that all manufactured or built products affect the environment and public health (positively or negatively), the public demands information and accountability from the developers, producers, and handlers of those products. Concern about environmental issues is no longer the province mainly of "activists," and no technical professional (not even the R&D folks) can remain aloof from those concerns for very long and remain successful. Bringing into the classroom the situations, ethical dilemmas, vocabulary, teamwork, and interactivity of environmental communication is a way of teaching, vividly and actively, the central theories of all those disciplines from which technical communication draws its lifeblood: organizational communication, cognitive psychology, information management, and, of course, information and visual design, writing, and oral communication. How effective to teach the dialogic, dynamic nature of communication by using as a starting point the National Research Council's definition of risk communication as "an interactive process of exchange of information and opinion among individuals, groups, and institutions" (*Improving Risk Communication* , 1989). Using environmental case studies also provides concrete models of communication as process and as social interaction. When an oil and gas company, for instance, has a spill or leak to clean up, the interactive, iterative process of communication becomes real and clear. The company must involve all the shareholders in its information-sharing, must seek audience input, and learns quickly that secrecy backfires. The company also learns the importance of framing environmental messages for maximum comprehensibility: all sides become aware of the importance of a shared rhetoric.

Bringing environmental case studies into the Technical Communication classroom makes communication the content not just the skill-building goal of the course. The ethical dilemmas inherent in typical environmental-risk situations become engaging topics for discussion that quickly expose the underlying framework of communication dilemmas. Students get to role-play and experience firsthand how problems of perspective become problems of language and communication. Environmental communication is not the same thing as technical communication, but it is a subset with which most students are already familiar. If we wish, in our classrooms and in practice, to set technical communication within a social context, we need

look no further than the last neighborhood-association meeting or the growing body of literature on environmental-communication case-studies (see, for instance, the studies in Powell and Liess, 1997, and in *Risk Analysis*, 1986, both cited below).

Works Cited

National Research Council. *Improving Risk Communication.* Washington, D.C.: National Academy Press. 1989.

Powell, Douglas and Liess, William. *Mad Cows and Mother's Milk: Case Studies in Risk Communication.* Montreal: McGill-Queen's University Press. 1997.

Sharlin, Harold I. "EDB: A Case Study in Communicating Risk." *Risk Analysis.* vol. 6. no.1. 1986

Some Rhetorical Comparisons of Technical and Scientific Communication

Elizabeth R. Turpin,
Ferris State University

The question in various programs sometimes arises about whether students in scientific and technical/technological areas should be included in the same communication classes. Is it feasible to try to teach scientific and technical/technological communication in the same course?

Despite the government pressure for truth in advertising, many schools have course descriptions in their catalogs that do not necessarily reflect the actual focus or coverage of the course as it occurs in the classroom. This, in some measure, is the result of who is admitted to a given communication course. For example, courses may be labeled "scientific communication" or "technical communication" but still enroll students from both classifications in either type of class, regardless of its title or catalog description.

Perhaps it would be appropriate to examine our current basis for and the rhetorical reasons for distinguishing between our two classifications of "scientific" and "technical" communication by asking ourselves some fundamental questions that apply to curriculum and program development.

In addition, success for ourselves in teaching and for students later in their careers may devolve upon how well we can answer such questions as the following:

1. What majors should be considered "scientific" and what ones "technical" or "technological"?

2. What differences in style or organization would students in the different major classifications be expected to use in an ultimate career position?

3. What differences in content would a class employ as part of the assignments in a "scientific communication" and a "technological or technical communication" class?

4. What difference, if any, would subject major or style make in teaching rhetorical principles such as audience analysis?

5. How important in a basic or service communication class in a technical or scientific field is it to understand certain organization formats particular to a given field (such as the IMRAD organization in medical literature)?

6. What differences in logic, if any, would different fields employ in presenting similar material in order to persuade an audience to agreement and/or action? Would the burden of proof be greater in one than another

DISTANCE LEARNING CONNECTIONS

Examining the Culture of Distance Education: Ideologies and Technologies

Ann Hill Duin and James Frost,
University of Minnesota, St. Paul

The advent of the digital age has changed not only the roles of technical communicators but the roles of educators preparing students for these roles. These changes have compelled administrators and instructors to rethink our education mission. One of the manifestations of these changes is the need for courses that can be delivered at a distance. Courses employing digital technologies for distance delivery are being developed at a frantic pace. An examination of mission, vision, and strategic plans from educational institutions around the nation and the world shows a reoccurring theme that we must dismantle the old "instructor centered" paradigm in favor of a new "student centered" one, and that to do so results in an educational enterprise relevant to the "just in time" learning demands of the modern world. The deep structure of modernizing education contains the idea that distance education is somehow cut loose from the old educational culture, for the "not so modern" society as it were. However, culture flows; it does not stop with a new educational model; rather, it permeates it.

With this in mind, it is helpful to step back and reexamine just what we have done in our "traditional" classroom and consider the implications that the new paradigm offers when moving these traditions to new delivery methods and technologies. How are the traditional roles of information delivery, mentoring, and evaluation changed in the new paradigm and the new mediums of delivery? How are our courses, program, institutions, and ultimately our missions transformed as the connectivity we design extends our purposes, our goals, and our reach? Also to be considered is how our "traditional" classes are impacted as we assimilate more and more instructional technologies borrowed from distance courses into resident classes. The immersion of both distant and resident classes into the cultures and ideologies of the internet and World Wide Web also present important questions that have not always been considered in the rush to keep our courses and programs current.

The Impact of Distance Learning on Technical Communication Programs

Patricia Goubil-Gambrell,
Texas Tech University

This paper addresses three areas that affect technical communication programs that offer or plan to offer distance learning courses, particularly at the graduate level.

Impact on program administration

Distance learning courses affect staffing. If distance learning courses are considered part of a faculty's regular teaching assignment, are there sufficient faculty to teach onsite courses? Or do onsite courses suffer in some way (few offered, offered less frequently, larger class size) to allow staffing of distance learning courses? Related to the issue of course load, if distance learning courses are considered overload, what status does that accord the distance learning courses? Does it make them appear less legitimate?

Distance learning courses may impact onsite course enrollments. In graduate education, will the availability of distance learning courses and degrees cause students not to become residential students? What does that mean for the future of onsite programs?

Distance learning courses may create scheduling difficulties. The decision must be made whether or not to run these courses in the timeframe of the university term, to allow a longer term, or to allow some sort of student self-pacing. The decision made about timeframe has implications for the pedagogy employed in the course as well as constrains those choices. If courses follow the university term, that would permit a cohort of students to work though a course together, engaging in cooperative learning and collaborative activities. If a more self-paced approach to the timeframe is chosen, students would probably work "alone," suggesting a different philosophy of how learning occurs.

Impact on faculty

Distance learning courses affect faculty primarily in the amount of preparation time that they require. Faculty may have to learn new technologies that they have not used before (for example, MOO conferencing, CGI scripting, video conferencing). Materials for the course have to be prepared. Whether or not faculty have release time for these activities affects the quality of distance learning courses as well as the ability of faculty to engage in other scholarly activities.

Impact on relationships with industry

Distance learning courses may affect a technical communication's program relationship with industry. Industry may have expectations about what distance learning courses should be that the university can't meet because of its institutional goals and constraints. Universities tend to see courses as "education," where industry may think of them more as training. Industry may expect more workshop and certification type courses where the university sees the goals of its courses as exposing students to knowledge, theory, and research about a particular topic.

How to Make Distance Education Work: Planning Ahead and Getting It Right the First Time

Kelli Cargile Cook,
Texas Tech University

Distance learning projects are expected to grow in number and in popularity in the coming years in order to meet the needs of universities seeking to provide greater access to education with increasingly tighter budgets. Technical communication programs are already beginning to explore methods for translating traditional classroom practices into distance education courses. Comprehensive discussions of such translations, however, do not yet exist in print, partially as a result of the nascent interest in teaching technical communications across distances and the lag time between experimental design, course delivery, and article production and publication. With so few working models to emulate or consider, today's technical communication program directors and instructors face a difficult task when seeking to determine the most appropriate and desirable technology mix for distance education delivery. One solution to this problem is a comprehensive feasibility study of technologies under consideration. Such a feasibility study should include analysis of technology availability and cost, programmatic goals, specific course pedagogical goals, and instructor and student needs assessments.

Depending upon a program's resources, a number of technological choices are available for distance education course delivery. The options can range from traditional correspondence courses to Internet-based courses, which might incorporate World Wide Web sites, email and MOOs. The choice of primary delivery technology is often the simplest, typically determined by what is already available at the institution. Choosing secondary delivery technologies, however, can be more challenging. For example, if the primary technology is Internet-based, instructors and program directors might need to consider whether print documents or course packets should be included in course delivery; whether audio technologies such as audioconferencing should be incorporated to increase social interactions between students and between instructor and students; and whether video and other multimedia technologies, including videoconferencing and use of instructional clips, enhance or undermine pedagogical goals for the course. To answer these questions, clearly defined programmatic and course pedagogical goals should be articulated in conjunction with possible technologies. Clarifying and prioritizing these goals can often help in sorting through the advantages and disadvantages of each prospective technology.

Technological costs further complicate these considerations. These cost considerations not only include potential expenses to the institution but also eventual expenses for students. For instance, the incorporation of just eight hours of toll-free conference calls into a distance education course can increase course costs from $70 to $115 per student, depending on enrollment numbers and carrier charges. In combination with other technological fees required for delivering distance education, such additional fees may make a distance education course an impossibility for some students. A student needs assessment can assist decision-makers in identifying students' financial concerns as well as provide them with an opportunity to gauge students' access to technology, comfort levels with prospective technologies, and desire for social interaction.

Instructor requirements are another important consideration when choosing technologies to include in a distance education course. These requirements include the amount of time required

for scheduling, planning, and implementing various technologies into the technology delivery mix. Since all of these activities increase instructor planning and evaluation time, program directors and instructors must consider whether additional instructional tasks associated with each technology are tenable.

Given the many considerations necessary to determine which technologies are feasible to include in the delivery mix, developing a distance education course takes much longer to plan than to teach. It also requires careful deliberation of often competing interests. Those individuals who have developed thriving distance education courses, however, assure us that a smooth, productive course is the reward for the forethought and preparation invested in a course's preliminary planning stages. To ensure the successful implementation of a technical communication distance education course then, program directors and instructors must be willing to slowly and carefully lay course foundations through diligent attention to the feasibility of the technologies available for course delivery.

Failure to Connect: Collaboration and Distance Learning in Scientific and Technical Communication Programs

Amy Hanson,
Texas Tech University

Collaboration has become an assumption for scientific and technical communication instruction, and as distance learning programs are developing, collaboration is a key element of those environments as well. However, while student-to-student and student-to-instructor collaborations are worthwhile in a distance learning situation, class-to-class collaboration and in-class instructor-to-instructor collaboration are more distracting than useful in a distance learning environment. This is not to say that instructors cannot learn from each other while teaching a course or that entire groups of students cannot benefit from working with other groups of students; I argue that two independent classes meeting together is an ineffective model for distance education because the multiple levels of collaboration overwhelm the learning environment.

In a recent distance learning project, an instructor at another institution and I collaborated to teach an introductory technical communication course to two independent classes of students. The classes were connected by compressed video with occasional use of email and the World Wide Web. The goal for the project was to highlight the strengths of each technical communication program by allowing the instructors to collaborate with each other and by encouraging the students to work across institutional boundaries.

This class-to-class model of distance education failed because throughout the semester the students saw themselves as members of only their on-site class; the instructors modeled collaboration during class periods, but the students focused on the comments and prompts given by the instructor in their same location. Therefore, the student-to-student collaboration between classes never happened; in fact, an "us-versus-them" attitude developed, which eliminated any collaborative benefits the distance learning environment could have afforded. In the student evaluations of the course, some students remarked that they felt that the time spent in the compressed video classroom was wasted and that the presence of another instructor and class was distracting and frustrating.

The technological resources available for this project were practically boundless, but the technology could not save this project. The course materials and even the tools used to teach the course promoted a collaboration that the distance learning model did not. Collaboration will always be an important element of technical communication, but as we continue to develop distance learning projects and programs, we must realize that collaboration can be taken to a negative extreme, a point at which collaboration can no longer occur.

Delivering On-line Degree Programs: Connecting Graduate Technical Communication Programs to Practitioners in the Work Place

Nancy M. O'Rourke, Utah State University

Most full-time working technical communicators (many of whom often have bachelors' degrees other than technical communication) are very strong in the "doing" of their work. However, they have may have little theoretical foundation for what they do. Thus, they need to know why and how else their work might be done. In other words, these communicators need a theoretical balance so that they may more effectively become developers and managers of documents, and that they may be qualified to determine and defend writing policy and practices in their own workplaces. A well-designed and flexible graduate program at the Masters level certainly accomplishes this. It should also increase their credibility in managing teams of communicators and give serious thought to ethical practices in the profession.

So far, I have said nothing new.

However, it is the delivery of the graduate program to full-time practitioners (who cannot leave their jobs to complete a traditional on-site degree program) that concerns me. On just one technical communication listserv, a number of requests for on-line courses and even degrees have recently appeared. So, we know that some need exists. However, can we, in fact, provide a quality graduate program nearly entirely on-line, with a few short summer workshops for those courses that instructors deem inappropriate for on-line teaching and learning?

At Utah State University, we have designed this kind of curriculum for the working technical communicator, with the intent of reaching beyond our own faculty to those at other institutions who may be able to offer different or unique perspectives than ourselves. We know that prospective students along the Wasatch Front in Utah will respond as will their employers. The program could also accommodate some non-matriculated students who want to take just one or two courses but not necessarily the master's degree.

Searching questions should be asked about this kind of delivery. Will it, in fact, lead to isolationism, negating social constructs that many of us try to build in the traditional, computer-mediated classroom and that exist in the work places. Will compatible software exist, for example, in an on-line course in help file authoring? On-line degree programs may succeed or fail. Only time will tell the tale. Some professionals are so enamored with technology that they may forget what Don Payne has said at CPTSC: If we have learned the lessons of our love affair with print, then we cannot treat computers as just another external technology, like some chemical process or engineering design.

DISCIPLINARY CONNECTIONS

Cross Talk: Technical Communications and Technical Curriculums

Dianne Atkinson, Purdue University, and Betsy Aller, Michigan Technological University

An important dynamic in the growth of technical writing courses in the university has been the expanding basis of support for these courses beyond English Departments. While WAC programs pioneered the collaboration of English department faculty with faculty in other disciplines, recent innovations in instructional delivery are now associated with substantial "in-house" investments by schools and departments outside of modern language and communications programs. Schools of Engineering, for example, are increasingly expected to provide specific support for communications skills as part of their technical coursework. The expectation that technical students are proficient after completing first year humanities requirements is shifting to the assumption that additional communications course work is necessary and might be provided optimally as an integrated program within technical curriculums.

The decision to develop such "discipline-specific" technical communication offerings often evolves from experience with "generic" communication courses, where students from a range of professional interests share the same technical communication course. The strengths of these "generic" courses are well known. Typically, these courses provide a grounding in robust and general rhetorical principles which help students prepare for a wide range of communication challenges. Additionally, such courses can provide opportunities for students from different disciplines to collaborate—valuable preparation for the "cross-functional" teamwork so often expected in the technical workplace. Finally, these courses are often at the frontiers, incorporating both new technology and pedagogical innovations in the teaching of communication skills. Innovation may be achieved first in these generic courses because of their proximity to graduate programs in rhetoric or to degree-granting undergraduate programs in technical communications. For example, an awareness of communication behavior as performance and not just as (rhetorical) disciplinary knowledge often differentiates coursework offered in communication departments as compared to coursework offered in disciplinary (e.g., engineering) departments.

As "parallel" programs develop in English and communications departments and also in technical and professional schools such as engineering, several important issues emerge. Can or should a common agenda be sought? How can conversations be fostered among such parallel programs and what outcomes might be valuable to all participants? By way of addressing these and related questions, a recent experience in "strategic" planning" by technical faculty in a school of engineering will be shared. Faculty are often most comfortable in their own areas of specialization and with planning specific course offerings. Working at the level of curricular planning and especially with the challenge of addressing coordination with other programs is difficult but offers a strategic opening for enriching the instructional resources for supporting the development of communication skills.

The position to be developed in this presentation is that 1) program diversity in technical communications is becoming more prevalent and more important, and 2) conversations must

cross disciplinary boundaries if the benefits of sharing parallel but different experiences are to be realized.

A Simulation of the Discipline(s): Undergraduate Technical and Scientific Writing Programs

Ed Nagelhout
Stephen F. Austin State University

For many small and mid-sized universities, technical and scientific writing is most often taught at the undergraduate level, appearing primarily as sophomore/junior-level courses. More often than not, these courses represent (serve as) the primary disciplinary writing requirement for a large number of technical and professional schools. This connection to discipline-specific needs of various majors across the campus may ultimately mark undergraduate technical and scientific writing programs as primarily a service and predetermine them as simulations—copies without originals. Technical and scientific writing programs as simulations marginalize and devalue the kinds of writing being taught in these classrooms, thereby inscribing a disenfranchised position and promoting subservience to other disciplines on campus. Continuing critical analyses of the current power formations operating within the university structure can operate to (re)inscribe and (re)define the goals and agendas that we have as a discipline, as well as promote opportunities for growth and advancement at local and classroom levels.

One area which needs to be explored further is how technical and scientific writing programs are implicated by non-distinctions made between concepts of Writing in the Disciplines (WID) and Writing Across the Curriculum (WAC). Historically, writing is not given much attention within the disciplines outside of academics. The assumption is that novice professionals will learn and understand the intricacies of disciplinary writing skills while at the university, since universities are assumed to teach writing that models disciplinary practice. These assumptions predetermine undergraduate technical and scientific writing classes as WID-based courses designed to teach undergraduate students to write like "professionals," thereby insinuating, from a post-structuralist perspective, purposes which can only be simulated. This simulacrum creates, more precisely, disconnections among classroom practices, student knowledge, and discipline-specific forms of writing. The technical writing classroom cannot be the specific writing situations of all disciplinary practices, and the technical writing classroom is certainly more than "standardized" forms and reports.

Programmatic goals should focus on further developing undergraduate literacies (rhetorical, visual, information, and computer), which are typical writing to learn goals associated with WAC, by giving students opportunities to examine them from disciplinary perspectives. Technical and scientific writing programs also need to acknowledge that the student populations of today and tomorrow are speakers of multiple socio-economic dialects, ethnic varieties, and language families; therefore, our programs need to develop an undergraduate curriculum which addresses the multi-literacy, multilingual needs of students seeking access to an increasingly diverse society. Students need to think critically about language and writing in terms of their own literacies to understand how technical and scientific writing will help them meet their own needs and goals as future professionals. Moreover, we need to better and more accurately communicate our goals with the other disciplinary formations on campus to express how our programs benefit everyone as technical and scientific writing programs, not as technical and scientific writing simulations.

Making Interdisciplinary Connections: A Small Technical Writing Program Struggles to Survive

Celia Patterson,
Pittsburg State University

Pittsburg State University (PSU), located in Pittsburg, Kansas, is a small regional university that serves the southeastern corner of the state. The unique character of the university rests with its School of Technology and Applied Science. One of the main components of the university's mission statement is to promote research in the application of technology. A university with such a mission seems ideally suited to support a technical writing program; yet that writing program is facing problems that threaten its survival.

The program began in 1970 when the School of Technology asked the English Department to provide a technical writing course for technology majors. In 1987, the English Department began to offer an emphasis in technical writing as part of its BA degree in English. The program has always remained small, graduating only a few majors and minors each year. The recent rapid growth in computer technology and in the field of technical writing itself have threatened the program's survival. The program is too small to justify the level of investment required to purchase the technology necessary to keep the program viable; nor will there be money available to hire additional faculty with expertise to teach the different kinds of courses that are also required to keep the program viable.

One possible solution to these problems is to offer an interdisciplinary major, a BA with an emphasis in technical communication granted by both the English Department and the Graphics and Imaging Technologies Department (GIT) in the School of Technology. In some ways, a joint effort from these two departments seems ideal. GIT already possesses much of the necessary computer and peripheral technology and also already offers some relevant courses, such as Graphic Software and Layout and Design. However, should GIT be interested in the interdisciplinary degree (and it has not yet been proposed to them), several problems present themselves. In addition to the inevitable administrative problems that accompany an interdisciplinary degree, the biggest problem would be accommodating the students. GIT maintains a 13 to 1 student/teacher ratio in all its classes to allow for individualized instruction and to provide separate work stations for each student. Even a small increase in enrollment in their courses means that some students must be excluded, an exclusion that can cause a student difficulties in completing certain course sequences, difficulties that GIT might find unacceptable for its students.

The English Department is still debating what solution it should pursue. If the interdisciplinary degree should prove unfeasible to either department, the technical writing program at PSU might find itself yet one more casualty of technology and a very ironic casualty of the growth of the technical communication profession itself.

Connecting Technical Writing to Creative Writing and Beyond

Bruce Maylath,
The University of Memphis

In the U.S. many, if not most, technical communication programs are housed in English departments, a situation that often results in difficulties for those in tech comm. Viewed by their peers in other areas of English, particularly literature, as peripheral, too close to industry, too practical, and too career-oriented, faculty members and students in tech comm programs can feel marginalized and discriminated against in departmental governance, budget allotments, and hiring decisions. Those who followed the ATTW list-serv discussion in spring 1995 no doubt smiled grimly as the phrase "literature's lock on English departments" was bandied about.

Such need not be the case. Faculty members in tech comm can build connections with their colleagues by manifesting to them the ways in which tech comm is integral and essential to the English department's mission. The key is to illuminate the role of technology in the pursuits undertaken by the other areas of English. With the acceleration of technological development and application, even the most stalwart of literary conservatives will admit, if grudgingly, that technology is changing the direction and practice of their pursuits. Literature's power within the discipline is the direct result of an old technology, the printing press, something McLuhan (1964) insinuated quite some time ago now. The new communication technologies fostered by computers will unquestionably alter the relationship of literary art and the printing press,

and with it literature's lock on English departments. As narrative opens to the possibilities of hypertext and interactivty, creative writers will want to adapt the new technologies to their craft. As they discover new tools, including multimedia, with which to tell their stories, those who analyze stories will be forced to come to grips with the new forms of storytelling. Literary criticism will evolve, moving closer to art criticism, speech theory, and music criticism.

Technical communicators are often the first to notice the communicative opportunities that developments in technology permit, the first to realize how technology is changing definitions of literacy and composition, and often the first to apply computer programs to aesthetic as well as practical work. William Horton's "New Media Literacy" column in Technical Communication is a good example of how technical communicators are keeping informed of the newest communication technologies. Perhaps College English will one day sport such a column, too, but it is revealing that it hasn't added a regular such update yet. In the meantime, technical communicators can provide the bridges to the new technology for their colleagues raised on pens and paper, much as they do for off-campus consumers. In building connections, they can strengthen their own positions within English departments.

The English Department at the University of Memphis provides examples of how such connective bridgebuilding can work. These include a technical communication professor collaborating with a literature professor on a hypertext program examining Yeats' poetry; a technical communcation professor teaching a course in document design for creative writers; and technical communication, creative writing, linguistics, and literature faculty members and graduate students combining efforts and staff to produce jointly a cultural studies/literary journal and a linguistics journal.

The document design course for creative writers provides perhaps the most transferrable element to other institutions. Because it alters the curriculum, it may also have the greatest impact. The course began with creative writing students and faculty asking for a course that would prepare students for work in the publishing business. Over three years it has evolved from an experimental doc design course into a permanent offering titled "Literary Publishing." Now team-taught by a professor in tech comm and one in literature and creative writing, it combines three areas: document design, publications management, and literary editing.

Work Cited

McLuhan, Marshall. Understanding Media: The Extensions of Man. Chicago: McGraw-Hill, 1964. 170-178. Rpt. as "The Printed Word," Contemporary Rhetoric: A Conceptual Background with Readings. W. Ross Winterowd, ed. New York: Harcourt Brace Jovanovich, 1975. 199-206.

A Rationale for Including Creativity Training in Technical Communication Programs

Henrietta Nickels Shirk
University of North Texas

Many students in technical and scientific communication programs come to the field with academic backgrounds in disciplines as pedagogically diverse as literary studies and the sciences or engineering. From the perspective of their previous disciplines, these students often wonder "How can I be creative in technical communication?" I suggest that the basic values and techniques of creativity fostered in these other disciplines be integrated into the academic activities in technical communication programs and that students be taught new and effective techniques for enhancing their creativity as professional technical communicators.

Research psychologist Mihaly Csikszentmihalyi at the University of Chicago suggests that there are differences in the quality of creative experiences among students in the humanities as opposed to those in math and the sciences. As he explains this situation, students in the humanities report a much more positive quality of creative experiences than do students in math and the sciences, because of the fact that the humanities are often more immediately enjoyable than math and the sciences and also because of our cultural attitudes toward "hard" academic subjects and the ways that they are currently taught. Therefore, math and science students are frequently less happy in their work, less motivated, and have less positive self-esteem when working on their talents in these areas than when doing other things.

Students enter the field of technical communication with mental models resulting from all of their previous "creative" experiences. However, the various kinds of creativity involved in technical communication are frequently both similar to and different from many of their previous experiences. Csikszentmihalyi has identified states of "optimal experience"—those times when people report feelings of concentration and deep enjoyment. These are experiences of consciousness called "flow," a state of concentration so focused that it amounts to absolute absorption in an activity. People typically feel strong, alert, in effortless control, unselfconscious, and at the peak of their abilities. Both their sense of time and their emotional problems seem to disappear, and they have an exhilarating feeling of transcendence. The metaphor of "flow" is one that many people have used to describe the sense of effortless action they feel in moments that stand out as the best in their lives. Athletes refer to such experiences as "being in the zone," religious mystics as being in "ecstasy," artists and musicians as "aesthetic rapture." I suggest that flow experiences are also central to the creativity inherent in technical communication.

Recent research among students in technical communication programs suggests that flow experiences (the essential ingredient of creativity) do indeed occur among many students when they are engaged in the academic activities typically provided in standard technical communication courses (based on work in progress by Shirk & Smith that reports numerous such occurrences among students in technical communication programs at three universities).

I therefore recommend that the concepts and skills of creativity be directly and specifically included in technical communication programs. This complement to traditional programs can be accomplished by establishing curricular connections with knowledgeable and experienced

psychologists, who can function as program consultants in the design and administration of such training. Creativity training should be included as an essential program component either within existing courses or as a separate required course. Either way, students will be better prepared to meet the ever-changing creative challenges of the professional workplace.

Books by Mihaly Csikszentmihalyi:

Creativity: Flow and the Psychology of Discovery and Invention. New York: HarperCollins, 1996.

Finding Flow: The Psychology of Engagement with Everyday Life. New York: HarperCollins, 1998.

Flow: The Psychology of Optimal Experience. New York: HarperCollins

COMMUNITY CONNECTIONS

The Public and Our Programs:
Recontextualizing the Public Sphere in Technical and Scientific Communication

Angela Petit
The University of Texas at El Paso

Deceptive terms, *public* and *public sphere* suggest well-bordered, physical sites where individuals gather to discuss issues that are somehow inherently "public." However, scholars who theorize the public sphere do not argue that there is an identifiable space or spaces that we can call "public"; rather, they go beyond material borders to identify discursive action as the source of this phenomenon. Thus, Susan Wells writes: "Public speech is a performance in time, located at specific historical junctures, temporary and unstable, even though it is imagined as a location in space, always available, with secure and discernible borders" (326-27). Many recent theorists also contend that what they refer to as the "public" remains closely tied to issues of politics, particularly to the political implications of what they frequently term "democratic" discourse. These scholars, however, acknowledge that defining terms like *public* and *political* presents problems: they understand that all discourse is at some level political, nor would many in this area draw a clear distinction between public and supposedly non-public (or "private") forms of discourse. As Bruce Robbins notes, "no sites are inherently or eternally public. The lines between public and private are perpetually shifting, as are the tactical advantages and disadvantages of finding oneself on one side or the other" (xv).

Nevertheless, Robbins would contend that taking the risk of isolating a term like *public* allows theorists to speculate about the ways that speakers and writers (who also take this risk) fashion themselves into a public or publics, to engage in ostensibly democratic discussion about issues that they deem politically important. Furthermore, Robbins and others would also argue that individuals who conceptualize these publics construct within their language discursive spaces designated for public debate; in other words, they construct a public sphere or spheres that serve as linguistic forums appropriate(d) for political conversations. This sphere may encompass a literal place or space, but the term more accurately highlights a conceptual scene for discourse, with the public sphere functioning as a spatial metaphor, one that enables theorists to frame and interpret discussions defined as political and public.

But what does the public sphere have to do with programs in technical and scientific communication? Quite a lot, actually. According to Joseph Harris, too often, "assignments in 'public writing' . . . can quickly seem absurdly decontextualized and formulaic in classrooms that are cut off from meaningful contact with the real public discourse of our society" (324). Academically-based programs do much to stress the "real world" aspect of scientific and technical communication—introducing students to the discursive environments and technologies at play within nonacademic settings. However, even in assignments and situations that stress "public" writings and audiences as they relate to technical and scientific communication, the public remains undertheorized and overlooked. Perceived as separate from the presumably more exclusive and restricted discourses of technical and scientific "experts," public audiences and genres remain an afterthought, a discursive area that students learn to negotiate after they have mastered scientific and technical discourses and must now communicate these discourses to that amorphous group known as the "public." However, theories of the public sphere demand that we acknowledge the potentially public and political nature of *all* discourses: technical and

scientific, expert and nonexpert, academic and nonacademic. In other words, we must acknowledge that the public sphere permeates all discursive arenas, and our goal must be to "recontextualize" the public, to use contemporary theories of the public sphere to connect our programs to the continually shifting but critically important sites of public, political action.

Works Cited

Harris, Joseph. "Research, Teaching, Public Argument." *College Composition and Communication* 47 (1996): 323-24.

Robbins, Bruce, ed. *The Phantom Public Sphere*. Minneapolis: U of Minnesota P, 1993.

Wells, Susan. "Rouge Cops and Health Care: What Do We Want from Public Writing?" *College Composition and Communication* 47 (1996): 325-41.

Thinking about our Connections (and Obligations) to the Public Sphere

Karen Rossi Schnakenberg
Carnegie Mellon University

As technical communicators in a society in which both personal and public policy decisions frequently require a detailed understanding and evaluation of science and technology, as well as related and often complex research methodologies, I believe we have both an obligation and an opportunity to develop courses and programs that use communication strategies proactively to promote both scientific and technological literacy and responsible and informed public policy.

While many in technical communication have traditionally acknowledged this responsibility, we have tended, more often than not, to approach it obliquely by focusing programmatic energy on educating individual communicators. Under this approach, the practitioners we educate are left pretty much on their own to forge personal and professional connections between their developing skills as technical communicators and the urgent needs for scientific and technological literacy in the closely-related worlds of individual and public affairs.

As a way to begin thinking about how we might take a more direct approach, I'll briefly describe a course we've been offering at Carnegie Mellon to our undergraduate and master's students for the last three years: Writing in the Public Interest.

This course is designed to cut across the strong distinctions we "and many writing textbooks" frequently make between courses in technical and scientific communication and courses in rhetoric, journalism, public relations, and public policy. It consciously extends the traditional approach to deliberative rhetoric to include techniques for public education and informed advocacy on public policy issues and gives particular attention to the technical and scientific aspects of these issues and the ways in which they figure into debates on public policy.

The sequence of assignments is designed to develop skills in research, responsible representation of issues, and public advocacy. The course includes the following components.

- an issues journal in which students track and analyze public debate on a specific issue
- observation, reporting, and analysis of actual public meetings on the issue
- detailed research including both technical and social aspects of the issue
- work in interpreting both relevant data and scientific and technical concepts for general audiences
- a case study of an exemplary program, practice, process, policy, or piece of legislation in the issue area
- a press conference on this issue, including a media plan, press kit, and public presentation

I offer this example as one approach to increasing our conscious connections to the public sphere. I hope it will function as a starting point for a fruitful discussion about how we may use our skill and resources to help combat the combination of scientific (il)literacy and broad public cynicism about the role of media and government that hampers informed public debate on important social and political issues.

Building a Graduate Certificate Program:
Making Connections With the Community-at-Large

Deborah S. Bosley,
University of North Carolina at Charlotte

In spring, 1998, the University of North Carolina at Charlotte will initiate a Graduate Certificate Program in Technical/Professional Writing in order to increase its connections with the business and technical communities of Charlotte. This program is a response to the needs of several markets: 1) technical writers wishing to upgrade their education, 2) professionals seeking a new career, and 3) current graduate students wanting only to concentrate on technical writing courses. In addition, this program makes connections with a new M.Ed. in Instructional Technology to provide technical writing electives for their students and instructional design electives for ours.

Building on two existing programs, an undergraduate minor and a graduate concentration, this certificate requires 21 hours including two courses at the graduate level, one internship, and 12 hours of technical communication at the 4000 (upper division undergraduates and graduate students) or the 6000 level (graduate students only). Practicing technical communicators may substitute their experience for the internship requirement. Students in these courses will be expected to attend the local STC meetings as a means of professional enhancement.

Admission into the program is handled through the Graduate School and requires 1) the submission of a portfolio, or 2) GRE, or 3) MAT scores. This program provides significant flexibility as students admitted to the more traditional MA in English program may transfer courses into the Certificate Program if they wish to discontinue work on the MA. Students in the Certificate Program may rollover courses into the MA if they are accepted into that program.

This presentation outlines the development of this program, its connections with other departments and institutions, and its future.

For a Service-Learning Pedagogy in Professional and Technical Communication Programs

Bill Macgregor,
Montana Tech of the University of Montana

Preparing technical communication students to enter the contemporary workforce involves helping them learn to make a series of necessary connections: between practice and theory; form and function; process and product; doing good and doing (as Michener said of the Yale missionaries to Hawaii) "right well." The litany of such connections is so familiar as to constitute cliches among academic practitioners in the field. Yet we are hard-pressed to come up with comparable unanimity as we approach the instructional design(s) by which these connections can best be implemented. I wish to propose service-learning as a pedagogy that is preeminent in making these, and many other, connections for students of technical communications.

When, in the spring of 1997 I was appointed to be the Campus Supervisor for the Montana Campus Compact / Campus Corps, I quickly discovered that service learning has acquired a significant following across the country. However, I also discovered that most service learning programs seem to stress the social-conscience (as opposed to the technical) side of the "service / learning" formula in a number of ways; mostly, however, this emphasis is evident in the frequency of human services fields that are enlisted into the program.

Earlier, at the Colorado School of Mines, where I enjoyed a 1995 sabbatical leave, I encountered an alternative service-learning program; one that takes a harder-edged approach to this pedagogy, and it is this program that is closest to my notion of an ideal for technical communicators. Titled EPICS (Engineering Practices Introductory Course Sequence), the program was at the time a four-semester sequence required of all CSM students (all in science and engineering fields). The keystone of the sequence is a series of community-service projects performed by teams of students: feasibility studies; industrial design projects; health & risk assessments; and so on. The rubric at CSM under which these service learning projects are conducted is called "engineering design." The focus of the EPICS program seems extravagantly, even luxuriously, broad: its basic premise is that technical expertise is useless unless it is connected to social, ethical, economic, and business contexts. Predictably, communication among technical specialists, and between specialists and the general public, is the operating methodology for the entire course.

Back at my home institution, Montana Tech, this pedagogy has translated quite well into my upper-level business and professional, and scientific and technical writing courses (each of them required of all students depending on their major). The service-learning paradigm provides a winning strategy for connecting the technical communication classroom and the various communities it aims to serve. For example, a team of engineers (in petroleum, environmental, geological, and industrial safety) might be placed with community client whose project requires them to work individually and communally to solve a problem that always turns out to be more complex than it seemed. The students work through (and with) the course instructor to meet the client's needs. The instructor provides a framework of key assignments to ensure a professional paper trail, giving students practice at producing routine documents to meet a real time-bound set of needs—not an artificial syllabus-driven assignment schedule. They learn to work together in a self-led team, depending on each other to "carry the ball" at critical moments during course of

the project. And they learn the intricate differences of intra-team communication, as opposed to communication with the manager/instructor, and communication with clients, vendors, and other external interested parties.

Results of this pedagogy in these classes are unambiguous. Student course evaluations frequently comment on the sense of value imparted by the complex, real-world (yet academically controlled) process — not merely the values of specific communication behaviors (the basic course goal), but the unsuspected values inhering in their own technical training. It is not unusual, for instance, for hard-nosed mining engineers to comment with mixed pride and diffidence about the feeling that their technical contribution has made a difference in the lives of people in the community, and that those people are grateful. Client comments on student achievement frequently express amazement at the level of professionalism shown by the student teams, by the quality of the information products delivered at the end of the cycle, and by the often surprised discovery that these students are both able, and eager, to use their technical training and experience to help solve real community problems.

Students whose planned professional careers are often identified with a me-first big-salary scramble learn, through this pedagogy, to connect their economic success with the personal satisfaction of giving back to the community. In connecting their written and oral communication efforts with the client, the instructor, and each other, students discover (and retain) the most important lessons they need to succeed as professional communicators. The connections formed by these client-based student projects—between students, among students and instructors, and among students and the community—fulfill larger curricular goals in ways few other course designs can manage.

Technical Communication Programs and Service Learning: Making the Connections

Kris Sutliff,
Southwest Missouri State University

The purpose of the volunteerism movement, which began in the early 1800s, was to promote morality and political stability in the United States. There was tremendous growth in the second half of the nineteenth century in order to meet the increasing social problems that resulted from industrialization and urbanization. Since that time thousands of national and local organizations have emerged in an effort to meet the ongoing social needs of citizens, and the number of nonprofits grows by leaps and bounds each year as new groups qualify for tax-exempt status. Recent legislative efforts to reform the welfare system and balance the federal budget will no doubt mean that nonprofits must assume greater responsibility for social services and do a better job of tapping private sources.

But what do decreased government support for charitable organizations and simultaneous cuts in federal entitlement programs have to do with us? Perhaps nothing, perhaps a great deal. That all depends on whether we want to use our skills to help restore the value of teaching and public service in American academic life. We are in the midst of a largely untapped gold mine of volunteerism: thousands of students looking for their niche in life. We are in a position to give our students the opportunity not only to learn about ideas and skills in a classroom but also to have experiences that promote public service into the twenty-first century.

Few of us would doubt the value of proposal writing as an academic assignment, if only so our students can learn to make a strong case for their future research projects. But if we ask our students to write a grant proposal as a service project for a local nonprofit agency, we can not only teach important skills but also provide critical services to the local community while developing a service ethic among our students. Students can improve their writing skills while gaining knowledge of funding sources and knowing they are making a difference in their community. We can only hope the knowledge and confidence students gain from such an experience will lead them to continue trying to make a difference after they graduate.

Of course grant-proposal writing is only one type of service project; reports and manuals and various other documents lend themselves equally well to service learning and are needed just as badly by nonprofit organizations.

Integrating service learning into the classroom stimulates both teaching and learning. Service learning projects are well suited to advanced courses in business and technical communication, and students appreciate the relevance of these "mini-internships" (which obviously increase contact between faculty and community members, helping to establish regular internships for these and other students in future semesters). Writing for service learning affords opportunities not just to advance our students' writing skills, but also to increase their awareness of the ethical issues and power of writing on the job. Both our students and the community stand to benefit from service-learning projects in the technical-writing classroom; it's a connection we should make.

INTERNATIONAL CONNECTIONS

Integrating Image Restoration Rhetoric into Professional Writing Courses

Gwendolyn Gong,
The Chinese University of Hong Kong

One of the major functions of rhetoric, according to William Benoit's (1995) recent theory of image restoration strategies, is to repair damage to an individual or group's positive portrayal of itself when it is attacked or criticized by other individuals or groups. The purpose of this presentation is to explore the implications of Benoit's theory for understanding image restoration rhetoric in multicultural communication situations (i.e., Asian) and to call for the integration of image restoration strategies in our professional writing courses.

In my presentation, I will begin by briefly identifying and explaining Benoit's theory, a taxonomy that increases students' ability to read and compose more analytically with greater awareness concerning multicultural differences in business, industry, and government contexts. Next, I'll explore several examples of how image restoration techniques were used by one multinational corporation called Vitasoy, when its soy-based drink products came under attack as being defective in 1995-1996. This case study is especially interesting as an application of Benoit's theory because the criticism of Vitasoy's soy-based drinks extended over several months, and their image restoration strategies developed and changed over the period of the criticisms. This kind of analysis will demonstrate the power of this taxonomy for developing critical reading and effective writing abilities. Lastly and most importantly, I'll conclude by urging teachers to integrate Benoit's rhetorical system in their courses and programs.

Reference

Benoit, W. L. (1995). Accounts, excuses, and apologies: A theory of image restoration strategies. Albany, NY: State University of New York Press.

Theoretical and Technological Barriers to International Communication

Sam Dragga
Texas Tech University

A two-week visit to the People's Republic of China in May of 1997 revealed that the status of technical communication in China is fairly dismal, quite similar to the way it was here in the United States a good thirty years ago. More important than the linguistic and cultural differences dividing us are the theoretical and technological barriers.

I traveled to China as leader of a delegation of twelve technical communicators and technical communication teachers from across the United States and Canada, sponsored by the Citizen Ambassador Program of People to People International. In meetings with teachers of language, science, and engineering at universities in Beijing, Guilin, and Suzhou, the delegation ordinarily was required to define the field of technical communication, explain the function of the profession, and justify the teaching of technical communication. Often the perception of the Chinese teachers was that technical communication was strictly communication from expert to expert instead of communication from expert to non-expert. While the Chinese were always polite and receptive, the delegation could sense that information we were offering was genuinely foreign.

In addition, the technological differences are considerable. E-mail and World Wide Web access is limited and erratic, less because of government policies restricting information and more because Chinese institutions are extraordinarily resource-poor (e.g., teaching materials are unavailable, buildings are poorly maintained, campus networks use telephone lines instead of hard wire). Computers are restricted to lab settings and Chinese keyboards are atypical, resulting in a multi-step writing process: the writer types words in pinyin, the computer displays the possible corresponding Chinese characters on the screen, and the writer chooses the specific Chinese characters pertinent to his or her message. Unlike the resource-rich locations of Asia (i.e., Hong Kong, Singapore, Japan), which easily maintain state-of-the-art facilities, the locations we visited in the People's Republic of China are clearly struggling to catch up and their progress is painfully slow and regrettably small.

As we explore issues of international technical communication in our universities and professional associations, we must develop programs and courses that improve our understanding of not only linguistic and culturaldifferences, but the theoretical and technological disparities that often influence and usually impede effective international communication.

Restructuring Our Undergraduate Programs: Internationalizing Our Curricula

Herb Smith,
Southern Polytechnic State University

Introduction

Most of us would agree that the Internet is providing us with opportunities and challenges unlike any that we have experienced in our lifetimes. In short, the Internet has helped internationalize the ways we do business and conduct research by helping us recognize, if not understand, the diversity of languages and cultures that shape our lives.

Although technology has provided us with a set of tools to help us make communication truly international, our undergraduate degree programs seem to be lagging behind. Few programs offer a single course in international communication. This paper argues that we need to do a better job of internationalizing our curricula.

Discussion

In an article entitled "Globalizing Professional Writing Curricula: Positioning Students and Re-positioning Textbooks" (Technical Communication Quarterly, Vol. 6, No. 2, pp. 179-200), Libby Miles comments on the growth in technical communication texts that have chapters on international communication. Miles also observes that often these texts position students who are international or non-native speakers as problematic barriers to effective communication. Nevertheless, we are making progress. A quick review of Technical Communication Quarterly's annual bibliographies for the past three years indicates the growing attention this topic is getting today. A minimum of five books and 33 articles have been published that focus on international technical communication.

Our students are also requesting that we spend more time in the classroom on this important topic. A recent graduate of Southern Polytechnic State University's masters program wishes she had taken a course in international technical communication. Her job title is Global Scheduling Coordinator for a major satellite corporation, a company that supplies network services worldwide. Her job requires constant direct communication with customers around the world. Another graduate works for a consulting firm whose client, a medical service provider, works closely with several multi-national companies. This graduate needs to write a procedure manual for telephone/computer operators who need to access, often in emergency situations, accurate information on available health care facilities and physicians located in a variety of international settings. She knew that a better understanding of culture and communication would help her do her job better.

In order to check on the status of international technical communication courses in our curricula, I conducted a random survey of 30 undergraduate program web sites in technical communication and professional communication. Of the 30 sites, only 8 offered a course in international technical communication or a similar course with a slightly different name (i.e. intercultural communication). Of these 8 programs, only 2 ha117117d more than one course.

If we perceive this lack of exposure to international technical communication a problem, we need to address it. A single course in international technical communication would be a good

starting point, but a concentration or minor in this area would accomplish much more. This concentration might be similar to the concentrations in a variety of technical fields that many undergraduate programs already offer. The following 15-hour concentration would be one way to accomplish this goal. There are, of course, many other ways to achieve the same result.

Table 1

International Option for a Technical & Professional Communication Program

Course	Hours
International Technical Communication	3
International Issues in Science and Technology	3
An Additional Foreign Language	3
Comparative Cultures	3
Internship (Study Abroad)	3
Total	15

Conclusion

An international concentration, particularly one that includes an internship in another country, will help emphasize the global nature of communication. It will also better prepare our students for the demands of the twenty-first century.

International Exchanges and Internships

Debby Andrews,
University of Delaware,
Mary Coney and Judy Ramey,
University of Washington

The context for technical and scientific communication is increasingly international. Programs thus need to prepare students and faculty to think internationally. One strategy for such preparation is international exchanges and internships. This presentation provides a progress report on our efforts to develop a resource base of such opportunities, a task we are undertaking as a joint effort of our departments at the University of Delaware and the University of Washington and as members of the ATTW international committee. We will discuss our investigation into currently available exchange opportunities for both students and faculty as well as the goals, criteria, funding, logistics—and problems—in setting up new programs and work site internships for U.S. academics (faculty and students) abroad and for international academics in the U.S.

24th Annual Business Meeting

Business Meeting Agenda

CPTSC 24th Annual Meeting
Business Meeting
Saturday, October 18, 1997
Austin, Texas

Agenda

1. Approval of Minutes from 1996 meeting at Oxford
2. Announcements
3. Treasurer's Report (Shirk)
4. CPTSC 24th Annual Meeting
   Business Meeting

Saturday, October 18, 1997
Austin, Texas

Report: STC (Rainey)

J5. Report: Website Development and Discussion List Activity (Selber, Bernhardt)

6. Old business
   a. Program Review (Yee, representing Bill Karis)
   b. Intecom Membership (Riordan)
   c. Next Year's meeting in Delaware
   d. Site for 1999
   e. Site for 2000
   Planning for the Forum

(Andrews, Bosley, Maylath)

7. New., business
   Fellows project (Riordan)

   /@. Issues for the Summit (Bernhardt, Bosley)
   c. Thanks

8. Invitation to Delaware

CPTSC

Minutes of the Business Meeting at the Twenty-fourth Annual Meeting
October 18, 1997
Austin, Texas

1. Approval of Minutes
   Minutes from 1996 meeting in Oxford, Ohio were read, distributed, approved via a motion by Carole Yee and a second by Dan Riordan.

2. Treasurer's Report
   Henrietta Shirk presented the treasurer's report (attached) which shows us to be in good financial shape with a current balance of $6,175.12 and a current membership of over 100 members.

3. Report: STC
   Ken Rainey, STC national officer, reported that research support from STC continues to be available. He encouraged members to apply for grants which can be as much as $10,000 for research. Mike Keene's book supported by such a grant is forthcoming. Projects have also been supported for Deb Andrews, and other CPTSC members.

   The STC curriculum development grants are being delayed while an STC task force redefines the goals and criteria for this program. It should be back up and running by September of next year.

   Ken also reported that the academic programs directory is now up and running on the STC home page. Updates should be directed to Peter Herbst. STC scholarships have been raised to $2500 and increased to 7 undergraduate and 7 graduate awards. An international database of theses and dissertations is being developed. The collection stands currently at about 200 but abstracts are welcome. Submit them to Ken Rainey via e)mail.

4. Report: Website Development and Discussion List Activity

   Stu Selber invites members to visit the CPTSC website currently housed and maintained at Michigan State. Information for the current meeting has been placed there, as have membership information and proceedings from our earlier meetings. This year's proceedings will also appear there. Presenters are urged to get their revisions or abstracts to Carole Yee by

January. Steve Bernhardt continues to serve as liason to Michigan Tech on matters relevant to management of our website.

The discussion list currently has 194 subscribers and could benefit from thoughtful and succinct contributions by members.

5. Old business

a. Program Review

Carole Yee, whose home school (New Mexico Tech) participated in CPTSC facilitated program review this year, represented Bill Karis to report on this activity. The procedures seem to have been appropriate for this school and were satisfactory to them. One issue that the experience highlighted was the need for some sort of reviewer's guidelines to address questions of support, honoraria, and the purpose of the report (evaluation versus formative recommendation.) Other schools currently exploring such a review or in some stage of the process include: New Mexico State, Southern Polytechnic State University (Georgia). Bill Karis is the contact person for this activity.

b. Intecom Membership

Dan Riordan reported that this "organization of organizations" has welcomed our application for membership. Our dues of $100 a year would give us ties to international technical comunication organizations and more familiar ones like IEEE and STC. We voted to join Intecom.

c. Next Year's meeting in Delaware

We will meet in 1998 at University of Delaware's facility, Virden Retreat Center. The facility has 26 rooms available and will be supplemented by several nearby bed)and)breakfasts. Deb Andrews will be joined by Lili Valez in planning the meeting. Dates are October 15)18. Rooms are $60/night, conference fee will be $75 for members and $95 for non members. Late registrations for members will be $85.

Proposals for presentations at the Delaware meeting will be solicited in January with a deadline of June 1.

d. Site for 1999

Carole Yee proposed that we make Santa Fe the site for our

meeting in 1999. Meetings would be held in the Plaza Rosalana which has some dormitory-style accommodations. There are also hotels nearby. After some discussion of coincidence of our meeting with other groups going to Santa Fe, and other possible conflicts such as religious holidays, the executive board was authorized to choose the exact date in their meeting.

e. Site for 2000

Deb Andrews reported on the potential for holding CPTSC 2000 in conjunction with Forum 2000 to be held near London in early November of that year. Since we will be members of Intercom by then, our members would have a 50% discount on Forum 2000 fees. Advantages of the international site might include focusing on globalization and multi-lingual issues. We might offer poster sessions and other variations of our usual program to help with travel funding matters. The sense of this discussion was positive, so Debbie Andrews will continue to chair the committee instigating plans for this event. Volunteers are welcome to help her with this work.

6. New business

a. Fellows Program

Dan Riordan reported on a plan to recognize contributions to Technical and Scientific Progams or the evolution of the field.

Modeled on the ATTW Fellows program, he suggested a committee of three former winners of such an award would meet annually to select individuals that we want to recognize for their exceptional service to the field. He suggested criteria such as the following:
---Longstanding membership in CPTSC
---Significant long term involvement in TSC programs at the local, or national level.

We discussed at some length whether to use the term "fellow," but the membership supported a motion by Debbie Andrews and seconded by Ken Rainey to initiate such a program. Suggestions for alternative phrasing are welcome on the list.

b. Nominating Committee

Dan reported that elections are due in late Spring of 1998. Offices to be filled are: president, vice president, secretary,

and three at-large executive committee positions. Dan continues to recruit for the ballot and welcomes volunteers.

c. Snowbird Summit Report

Deborah Bosley and Steve Bernhardt will represent CPTSC at the Snowbird summit—a meeting which brings together the various US organizations concerned with technical communication. A lively discussion produced a number of issues Steve and Deborah were encouraged to bring up at Snowbird.

7. Closing Remarks

Deb Andrews issued an official invitation to next year's Delaware meeting.

Members were reminded of the 25th anniversary ATTW conference to be held on the pre-convention day at CCCC (April 1 at the Palmer House in Chicago).

Meeting adjourned at 12:00 noon.

Respectfully,

Jennie Dautermann,
Secretary

Note: These minutes are written, submitted to the Board, and printed in the Proceedings in draft; they are approved at the Annual Business Meeting the following year.

attachment: Financial Report 1996-97

CPTSC Financial Report

November 1, 1996, to October 15,1997

BALANCE FROM NOVEMBER 1, 1996			$6,187.45	
CREDITS/INCOME				
Interest on Checking Account			63.76	
1996 Annual Conference Income (Miami University)			3,670.00	
Individual Memberships (96 @ $20 each)			1,920.00	
Institutional Memberships (2 @ $ 1 00 each)			200.00	
Contributions to 1997 Annual Conference			700.00	
		Total:	6,553.7	6,553.76
				+12,741.21
DEBITS/EXPENSES				
Payment to Miami University for 1996 Conference Expenses	4,444.45	4,444.45		
Newsletter—Fall 1996				
Paper, Printing, Postage		122.83		
Design		100.00 -		
		222.83	222.83	
Proceedings -- 1996				
Paper, Printing		1,051.25		
Postage		114.08 -		
		1,165.33	1,165.33	
Newsletter—Spring 1997				
Paper, Printing, Postage		110.13		
Design		100.00		
		210.13	210.13	
Miscellaneous Administrative Costs:				
Printing of Stationery, Brochures		468.12		
Postage		33.73		
Mailing Labels		21.50		
		523.35	523.35	
			6,566.09	
BALANCE:				$ 6,175.12

Respectfully submitted,
Henrietta Nickels Shirk
CPTSC Treasurer

Executive Committee Meeting

CPTSC

Minutes of the Executive Committee at the Twenty-fourth Annual Meeting
October 16-18, 1997
Austin, Texas

The Executive Committee met in several sessions at the Austin Conference site (Thursday afternoon, Saturday before the Business Meeting, and Saturday evening over dinner). Present: Dan Riordan, Steve Bernhardt, Deborah Bosley, Carole Yee, Jennie Dautermann, Carolyn Rude, Stuart Selber, Henrietta Shirk, Katherine Staples (1997 host) Deborah Andrews (1998 host).

Katherine Staples described plans for the current meeting . She suggests penalizing people for late registration next year in order to get better estimates of the attendance for negotiations about facilities. Industry donors this year were quite helpful, and should become a continuing feature of the conference. Katherine encouraged the executive board to take advantage of the website for publicity for future conferences and to pay close attention to the growth options for the conference while taking care to preserve our tradition of open, friendly and engaged discussion. She also suggests that the mailing list be updated as soon as possible so that communications with members about the conference can be expedited.

One pressing concern related to late registrations which made the counts for meals and other accommodations difficult to determine. Next year, we will plan to set a different rate for non-members and on-site registrations. We will propose the following rates to the business meeting on Saturday morning: advanced registration, $75 for members; $95 for non-members. On-site registration will be $85 for members and $105 for non-members. (this scale assumes a clear and up-to-date membership list.)

We reviewed Dan's proposal (derived from the ATTW fellows project) for an award for distinguished service to Technical and Scientific Communication programs at the national level. It will be presented at the Business Meeting. Since next year seems to be the 25th anniversary of CPTSC, it might be a good way to mark the milestone by beginning this program with a class of 5 awardees who would in turn form the selection committee for future awards.

Carole Yee presented plans for a Santa Fe conference. These plans were presented to members at the Business Meeting later in the

day. We also discussed the current status of the year 2000 options which also became part of the agenda for the Business Meeting.

Stuart and Carolyn reported on the program issues they encountered with this year's more numerous proposals. They expressed concern over the number of speakers we should try to accommodate at future conferences. They reported on several measures they took to include as many speakers as possible this year. Speakers were put together into three concurrent sessions in order to accommodate more participants. We recommended that next year's program deadlines be in June so as to give the program committee time to work through the selections. Proceedings of the current meeting will be added to the website Stuart and Carole will formulate a plan for this. The web site may need to be registered with Yahoo and/or other search engines.

Some brainstoming with Deb on the Delaware meeting produced suggestions for people in the area who could be invited as keynote speaker. All the at-large team will participate in the conference planning. Announcements will go on the web, on several appropriate listservs, and in the major journals.

Dan reported on his continuing work to begin the nominating process for new officers. He will continue to work with other past chairs to produce a ballot to be distributed by the secretary in August.

Other issues relevant to officer responsibility and fiscal matters were discussed. Requests for the membership lists may be considered if the uses will be professional rather than commercial. We may need to consider a credit or debit card for expediting expenses, and attention will be paid to cashing membership checks in a timely manner. Henrietta will check on our tax-exempt status and whether our fiscal year can be made the calendar year so that the conference expenses can be reported in the year they occur.

We agreed to authorize some clerical help for Carole on the newsletter and for Henrietta's data base work. As for MTU's web work, we believe that internship credit is sufficient for those students who have that arrangement with MTU's program, but we will send an honorarium to Pete who has done tremendous work on setting up the web. Only exceptional student volunteers should receive full fee waivers for annual meetings, but we authorized up to $200 for student wages in the proposed budget for next year's conference.

The committee expressed thanks to Katherine and her staff for

their excellent work with the annual meeting. Special thanks go to the following volunteers: Floyd Clark, Kelli Argile Cook, Monica Lake, Sherri Miles, Mary Kay Olenak, Nancy Singh, Jeff Todd, Nancy Wheeler. The committee adjourned at 8:30 p.m. on Saturday Evening.

Respectfully Submitted,

Jennie Dautermann, Secretary

APPENDICES

Appendix A:
CPTSC 1997 Conferees

Christine Abbott
Northern Illinois University
301 N. Water Street
Batavia, IL 60510
cbabbott@aol.com
630/406-1780

Allan Adams, Jr.
Adams Translation Services
12885 Research Blvd., #206
Austin, TX 78750
aadams@adamstrans.com
512/258-6676

Nancy Allen
Eastern Michigan University
Dept. of English
Ypsilanti, MI 78197
nallen@online.emich.edu

(313)487-0150

Betsy M. Aller
Michigan Tech University
735 Stevens Avenue
Dept. of Chemical Engineering

bmaller@mtu.edu

Debby Andrews
University of Delaware

Portland, ME 4103
dandrews@udel.edu
207/797-0236

Dianne Atkinson
School of Mechanical Engineering

West Lafayette, IN 47907
dla@ecn.purdue.edu
765/494-1363

Carol M. Barnum
Southern Polytechnic State University
1100 S. Marietta Pkwy.
Marietta, GA 30060
cbarnum@spsu.edu
770/528-7201

Barbara G. Bartholomew
University of Houston-Downtown
English Dept., UH-Downtown, One Main Street
Houston, TX 77002
bartholomew@dt.hu.edu
713/221-8117

Gary Bays
University of Akron-Wayne College
1901 Smucker Rd.
Orrville, OH 44667
BAYSG@UAKRON.EDU
330/684-8751

Stephen A. Bernhardt
New Mexico State University
Department of English
4583 Sandalwood
Las Cruces, NM 88011
sbernhar@nmsu.edu
505/521-4961

Carolyn Boiarsky
Purdue University--Calumet

7245 Knickerbocker Pkwy.
Hammond, IN 46323
boiarsc@AXP.calumet.purdue.edu
219/989-0871

Deborah S. Bosley
UNC-Charlotte

Charlotte, NC 28223
dsbosley@email.uncc.edu

704/547-2708

Katie E. Bradford
Prentice Hall Publishers
1208 E. BroadwayRd., Suite 110
Tempe, AZ 85282
katie_bradford@prenhall.com
602/921-1113 ext. 20

Glenn Broadhead
Oklahoma State University

bhead@okway.okstate.edu

Mary B. Coney
University of Washington
14 Loew Hall, Box 352195
Seattle, WA 98195
mconey@u.washington.edu
206/543-4557

Kelli Cargile Cook
Texas Tech University

3002 31st St.
Lubbock, TX 79410
ngack@ttacs.ttu.edu
806/791-5676

Marilyn M. Cooper

Technological University–Humanities
Michigan
1400 Townsend
Houghton, MI 49931
mmcooper@mtu.edu
906/487-3233

Jennie Dautermann
Miami University of Ohio

dauter@muohio.edu

Sam Dragga
Texas Tech University

Department of English, Box 43091
Lubbock, TX 97409
ditsd@ttacs.ttu.edu
806/742-2521

Pamela Ecker
Cincinnati State Technical and Community College

3520 Central Pkwy.
Cincinnati, OH 45223
eckerps@cinstate.cc.oh.us
513/569-1722

Lester Faigley
University of Texas at Austin

Division of Rhetoric and Composition
Austin, TX 78712
faigley@uts.cc.utexas.edu
512/471-3370

Tim Fountaine
California State University, Chico

English Department
Chico, CA 95929
tim fountaine@macgate.csuchico.edu
916/898-5796

James Frost
University of Minnesota–Twin Cities

Dept. of Rhetoric , 64 Classroom Office Bldg
St. Paul, MN 55108
frost007@tc.umn.edu
612/624-0710

Gwendolyn Gong
The Chinese University of Hong Kong

English Language Teaching Unit
Shatin, Hong Kong 0
ggong@cuhk.edu.hk
(852)2609-7466

Patricia Goubil-Gambrell
Texas Tech University
English Dept.–MS 3091
Lubbock, TX 79409
gkpgg@ttacs.ttu.edu
806/742-2541

Laura J. Gurak
University of Minnesota–Rhetoric
1994 Buford Ave./64 COB
St. Paul, MN 55108
gurak@epx.cis.umn.edu
612/624-3773 or 3445

June Chase Hankins
Southwest Texas State University
Dept. of English
San Marcos, TX 78666
JH20@SWT.edu
512/245-7680

Amy Hanson
Texas Tech University

4830 11th
Lubbock, TX 79416
ykfam@ttacs.ttu.edu
806/799-6897

Hillary Hart
University of Texas

Dept. of Civil Engineering, ECJ 8214
Austin, TX 78712
hart@mail.utexas.edu
512/471-4635

Leigh Henson
Southwest Missouri State University

9091 S. National Ave.
Springfield, MO 65804
dlh105f@nic.smsu.edu
417/836-5107

Tyanna Herrington
Georgia Institute of Technology
School of Literature, Communication, and Culture
Atlanta, GA 30332
tyanna.herrington@lcc.gatech.edu
404/894-6207

Margaret Hundleby
Auburn University

hundlma@mail.auburn.edu

Ann S. Jennings
University of Houston–Downtown
One Main St., Suite 1045 South
Houston, TX 77002
jennings@dt.uh.edu
713/862-8312

Michael L. Keene
University of Tennessee
Department of English
Knoxville, TN 37996
mkeene@utk.edu
423/974-5401

M. Jimmie Killingsworth
Texas A&M University
Dept. of English
College Station, TX 77843
killingsworth@tamu.edu
409/847-8550

Monica Lake
Dell Computer Corporation
2214 West Braker Lane
Austin, TX 78751
monica_lake@ccmail.us.dell.com
512/728-9675

Kate Latterell
Texas Tech University

Dept. of English
Lubbock, TX 79409
cgl@ttu.edu
806/742-2502

Tamara Lewis
National Instruments

6504 Bridge Point Parkway
Austin, TX 78730
tamara.lewis@natinst.com
512/349-5079

Sherry Little
San Diego State University

English Department
San Diego, CA 92020
slittle@mail.sdsu.edu
619/594-5238

Eben W. Ludlow
Allyn & Bacon

1633 Broadway

New York, NY 10019
eludlow@aol.com
212/654-6788

William B. Macgregor
Montana Tech of the University of Montana

1300 W. Park St.
Butte, MT 59701
wmacgregor@pol.mtech.edu
416/496-4423

Bruce Maylath
The University of Memphis

English Dept., Campus Box 526176
Memphis, TN 38152
bmaylath@cc.memphis.edu
901/678-4490

David McMurrey
Austin Community College

hcexres@io.com

Ed Nagelhout
Stephen F. Austin State University
P.O. Box 3007 SFA Station
Nacogdoches, TX 75961
enagelhout@sfasu.edu
(409)418-2226

Nancy O'Rourke
Utah State University

norourke@cc.usu.edu

Mary Kay Olenak
Dell Computer
Corporation
2214 West Braker Lane
Austin, TX 78758
mkolenak@ccmail.us.dell.com
Harrisonburg, VA 22807

512/338-4400

Elizabeth R. Pass
James Madison
University
Institute of Tech &
Sci Comm/ Wilson 313,
MS1017

passer@jmu.edu
540/568-813

Celia Patterson
Pittsburg State
University
1701 S. Broadway
Pittsburg, KS 66762
patters@mail.pittstate.edu

316/235-4698

Don Payne
Iowa State University

5021 Emerson Dr.

Ames, IA 50014
donpayne@iastate.edu
515/292-6777

Brian Pedell
Federal Express
Corporation

497 Dickinson
Memphis, TN 38112
bjpedell@latte.memphis.edu

901/278-6530

Angela Petit
University of Texas
at El Paso

Dept. of English,
Hudspeth Hall #113
El Paso, TX 79968
angpetit@utep.edu

(915)747-624

Kenneth T. Rainey
Southern Polytechnic
State University
1100 S. Marietta Pkwy.
Marietta, GA 30060
krainey@spsu.edu
770/528-7209

Judy Ramey
University of
Washington
Dept. of Technical
Communication, Box
352195
Seattle, WA 98195
jramey@u.washington.edu

206/543-2588

Lu Rehling
San Francisco State
University
1600 Holloway Ave.
San Francisco, CA
94132
rehlingl@sfsu.edu
415/338-7025

Dan Riordan
University of
Wisconsin–Stout
Department of

1215 Wilson Ave.
Menomonie, WI 54751
driordan@uwstout.edu
(715)235-7002

Deborah Rosenquist
Dell Computer
Corporation

2214 W. Braker Lane
Austin, TX 78758
deborah_rosenquist@
ccmail.us.dell.com

Carolyn Rude
Texas Tech University

English, MS 3091
Lubbock, TX 79409
rude@ttu.edu
806/742-2517

Gerald Savage
Illinois State
University

Department of English
Campus Box 4240 ISU
Normal, IL 61790
gjsavag@ilstu.edu
309/438-7986

Karen Rossi
Schnakenberg
Carnegie Mellon
University

5000 Forbes Avenue
Pittsburg, PA 15213
krs@andrew.cmu.edu
412/268-2659

Karen A. Schriver
KSA, Document Design
& Research

33 Potomac St.
Oakmont, PA 15139
ks0e+@andrew.cmu.edu
412/828-8791

Stuart Selber
Texas Tech University

English Dept., Box 43091

Lubbock, TX 79409
selber@ttu.edu
806/742-2507

Cynthia L. Selfe
Michigan Technological University

1400 Townsend Drive
Houghton, MI 49931
cyselfe@mtu.edu
906/487-2447

Richard Selfe
Michigan Technological University

1400 Townsend Drive
Houghton, MI 49931
906/487-2447

Betsy Smith
Auburn University

9030 Haley Center—

Dept. of English
Auburn University, AL 36849
smitheo@mail.auburn.edu
(334)844-9071

Herb Smith
Southern Polytechnic State University

hsmith@spsu.edu

Katherine Staples
Austin Community College

508 Park Blvd.
Austin, TX 78751
kstaples@bga.com
512/223-4831

Susan Stevenson
Simon Fraser University

1997 East 4th Ave.
Vancouver, B.C., Canada
stevenso@sfu.ca
604/251-1759

Dale Sullivan
Michigan Technological University

Houghton, MI 49931
dsulliva@mtu.edu
906/487-3256

Kris Sutliff
Southwest MO State University

901 S. National Avenue
Springfield, MO 65804
kss172F@wpgate.smsu.edu

417/836-5107

Jeff Todd
Texas A&M

1700 Southwest Pkwy #128
College Station, TX 77840
jat6677@acs.tamu.edu
409/693-1128

Elizabeth R. Turpin
Ferris State University—Big Rapids, MI

19418 Golfview Drive
Big Rapids, MI 49307
eturpin@net-port.com
616/796-7672

Craig Waddell
Dept. of Humanities, MTU

1400 Townsend Drive
Houghton, MI 49931
cwaddell@mtu.edu
(906)482-1636

Becky Webb
SAS Institute, Inc.

Box 200075
Austin, TX 78720
512/258-5171

Mary Webb
University of Nevada

English Dept., MS 098
Reno, NV 89557
marywebb@unr.edu
702/784-6709

Carole Yee
New Mexico Institute of Mining and Technology

Socorro, NM 87801
cyee@nmt.edu
505/835-5323

Appendix B:
Annual Meetings, Sites and Dates

1st	University of Minnesota	St. Paul, MN	1974
2nd	Boston University	Boston, MA	1975
3rd	Colorado State University	Fort Collins, CO	1976
4th	University of Minnesota	St. Paul, MN	1977
5th	Rensselaer Polytechnic Institute	Troy, NY	1978
6th	Oklahoma State University	Stillwater, OK	1979
7th	University of Central Florida	Orlando, FL	1980
8th	University of Washington	Seattle, WA	1981
9th	Carnegie-Mellon University	Pittsburgh, PA	1982
10th	University of Nebraska	Lincoln, NE	1983
11th	La Fonda	Santa Fe, NM	1984
12th	Miami University	Oxford, OH	1985
13th	Clark Community College	Portland, OR Vancouver, WA	1986
14th	University of Central Florida	Orlando, FL	1987
15th	University of Minnesota	Minneapolis, MN	1988
16th	Rochester Institute of Technology	Rochester, NY	1989
17th	San Diego State University	San Diego, CA	1990
18th	University of Cincinnati	Cincinnati, OH	1991
19th	Boise State University	Boise, ID	1992
20th	University of North Carolina-Charlotte	Charlotte, NC	1993
21st	New Mexico State University	Las Cruces, NM	1994
22nd	Michigan Technological University	Houghton, MI	1995
23rd	Miami University	Oxford, OH	1996
24th	Texas Partners of the CPTSC	Austin, TX	1997

Appendix C:
1994-1996 and 1996-1998 CPTSC Officers

1994-1996 CPTSC Officers

President:	Dan Riordan	University of Wisconsin-Stout
Vice-President:	Marilyn Cooper	Michigan Technological University
Treasurer:	Henrietta Shirk	Boise State University
Secretary:	Steven Bernhardt	New Mexico State University
Members at Large:	Deborah Bosley	University of North Carolina-Charlotte
	Carolyn Rude	Texas Tech University
	Katherine Staples	Austin Community College
Past President:	James P. Zappen	Rensselaer Polytechnic Institute

1996-1998 CPTSC Officers

President:	Steven Bernhardt	New Mexico State University
Vice-president:	Carole Yee	New Mexico Institute of Mining and Technology
Treasurer:	Henrietta Shirk	North Texas State University
Secretary:	Jennie Dautermann	Miami University
Member at Large:	Deborah Bosley	University of North Carolina-Charlotte
	Carolyn Rude	Texas Tech University
	Stuart Selber	Texas Tech University
Past President:	Dan Riordan	University of Wisconsin-Stout

Appendix D:
CPTSC List of Members

Christine Abbott Northern Illinois University 301 N. Water St. Batavia, IL 60510 Department of English Northern Illinois University Dekalb, IL 60115 815-753-6606 630-406-1780 cbabbott@aol.com	Allan W. Adams, Jr. Adams Translation Services 12885 Research Blvd., Suite 206 Adams Translation Services Austin, TX 78750 11608 Jamieson Austin, TX 78750 258-6676 258-0004 aadams@adamstrans.com	Gerald J. Alred University of Wisconsin - Milwaukee Department of English Curtin Hall, P. O. Box 413 University of Wisconsin - Milwaukee Milwaukee, WI 53201 3555 N. Cramer St. Shorewood, WI 53211 414-229-4511 414-964-4472 alred@csd.uwm.edu http://www.uwm.edu/People/alred
Paul V. Anderson Miami University (Ohio) Department of English Bachelor Hall Miami University Oxford, OH 45056 735 High Meadow Lane Oxford, OH 45056 513-529-3418 513-523-1548 anderspv@muohio.edu http://miavx1.muohio.edu/~utsccuis	Dianne Atkinson Purdue University School of Mechanical Engineering Purdue University West Lafayette, IN 47907 626 Rose Street West Lafayette, IN 47907 317-494-1363 317-746-1011 dla@ecn.purdue.edu	Marian G. Barchilon Arizona State University (East) Dept. of Information and Management Technology 6001 South Power Road, CNTR Bldg. Mesa, AZ 85206 5804 S. Country Club Way Tempe, AZ 85283 602-727-1669 602-839-4553 atmgb@asuvm.inre.asu.edu
Carol M. Barnum Southern Polytechnic Humanities and Technical Communication 1100 S. Marietta Pkwy. Southern Tech. Marietta, GA 30060 705 Elkmont Dr. NE Atlanta, GA 30306 770-528-7201 404-881-8136 cbarnum@spsu.edu	Barbara G. Bartholomew University of Houston - Downtown English Department UH - Downtown One Main Street Houston, TX 77002 3618 Corondo Court Houston, TX 77005 713-221-8117 713-665-2185 bartholomew@dt.uh.edu	Stephen A. Bernhardt New Mexico State University Dept. of English, 3E New Mexico State University Las Cruces, NM 88003 4583 Sandalwood Dr. Las Cruces, NM 88011 505-646-2027 505-521-4961 sbernhar@nmsu.edu http://www.nmsu.edu/~english http://www.nmsu.edu/techprof

Beatrice Christiana Birchak University of Houston - Downtown Associate Dean, College of Humanities and Social Sciences One Main St., Suite 1015-S University of Houston - Downtown Houston, TX 77002-1001 3902 Cypressdale Spring, TX 77388 713-221-8480 713-353-8674 birchak@dt.uh.edu http://www.dt.uh.edu/degree/english/profwrit.htm	Kaaren Blom Canberra Institute of Technology Communication Dept., Bruce Campus P. O. Box 826 Canberra ACT 2601 Australia 37 Mortlock Circuit Kaleen ACT 2617 Australia +61-6-241-5742 kaaren.blom@cit.act.edu.au	Carolyn Boiarsky Purdue University - Calumet Laushe Hall, 232E Purdue University - Calumet Hammond, IN 46323 2149 Tanglewood Drive, #2A Hammond, IN 46323 219-989-2207 219-989-0871 boiarsc@AXP.calumet.prudue.edu
Carolyn Boiarsky Purdue University - Calumet Laushe Hall, 232E Purdue University - Calumet Hammond, IN 46323 2149 Tanglewood Drive, #2A Hammond, IN 46323 219-989-2207 219-989-0871 boiarsc@AXP.calumet.prudue.edu	Deborah Bosley UNC Charlotte Department of English UNC Charlotte Charlotte, NC 28223 824 Heather Lane Charlotte, NC 28209 704-547-2708 704-523-1282 dsbosley@email.uncc.edu http://www.uncc.edu	Tracy Bridgeford Michigan Tech University Department of Humanities, Walker 314 1400 Townsend Road Michigan Tech University Houghton, MI 49931 729 Quincy, #8 Hancock, MI 49930 906-487-3237 906-487-5592 tbbridge@mtu.edu
Glenn J. Broadhead Oklahoma State University English Department 205 Morrill Oklahoma State University Stillwater, OK 74078-0135 2018 W. Sunset Stillwater OK, 74074 405-744-6217 405-372-9127 bhead@vm1.ucc.okstate.edu	Randy Brooks Millikin University 1184 W. Main Street Millikin University Decatur, IL 62522 4634 Hale Drive Decatur, IL 62526 217-424-6264 217-877-2966 rbrooks@mail.millikin.edu	Rebecca E. Burnett Iowa State University 112 North Riverside Dr. Ames, IA 50010-5971 Department of English 203 Ross Hall Iowa State University Ames, IA 50011-1201 515-294-5654 515-233-4506 Fax: 515-294-6814 rburnett@iastate.edu

Mary Burrows Texas State Technical College 300 College Drive Texas State Technical College Sweetwater, TX 79556 284 CR 130 Sweetwater, TX 79556 915-235-7445 915-236-6279 mburrows@sweetwater.tstc.edu	Charles P. Campbell New Mexico Institute of Mining & Technology Humanities Department New Mexico Institute of Mining & Technology Socorro, NM 87801 4400 Tulane Dr. NE Albuquerque, NM 87107-4834 505-835-5284 505-881-2861 cpc@nmt.edu cpc@swcp.com http://www.cramer.nmt.edu http://www.nmt.edu/~cpc/	Mary B. Coney University of Washington Dept. of Technical Communication 14 Loew Hall, FH-40 University of Washington Seattle, WA 98195 714 Bellevue Avenue E., #603 Seattle, WA 98102 206-543-4557 206-323-4200 mconey@uwtc.washington.edu
Kelli C. Cook Texas Tech University Department of English M.S. 3091 Texas Tech University Lubbock, TX 79409 3002 31st St. Lubbock, TX 79410 806-742-2564 806-791-5676 ngack@ttacs.ttu.edu	Marilyn M. Cooper Michigan Tech. University Department of Humanities 1400 Townsend Drive Michigan Tech. University Houghton, MI 49931 402 W. South Avenue Houghton, MI 49931 906-487-3233 906-482-7834 mmcooper@mtu.edu	Nancy W. Coppola New Jersey Institute of Technology Humanities and Social Sciences Department University Heights New Jersey Institute of Technology Newark, NJ 07102 10 Woodland Ave. Mountain Lake, NJ 07046 973-596-5726 201-334-0075 copploa@admin.njit.edu
Patricia L. Cornett Lawrence Technological University Humanities Department 21000 W. 10 Mile Rd. Lawrence Technological University Southfield, MI 48075 31651 Auburn Dr. Birmingham, MI 48025 248-258-9214 248-646-2895 pc@annis.com	Donald H. Cunningham Auburn University Department of English 8054 Haley Center Dept. of English Auburn University Auburn, AL 36849 2114 Hamilton Place N. Opelika, AL 36801 334-844-9061 334-745-6059 cunnidh@mail.auburn.edu	Jennie Dautermann Miami University (Ohio) Department of English 303 Bachelor Hall Miami University Oxford, OH 45056 5638 Springdale Rd., 3 Cincinnati, OH 45251 513-385-0417

Marjorie T. Davis Mercer University Dept. of Technical Communication School of Engineering Mercer University Macon, GA 31207 104 Everett Sq. Fort Valley, GA 31030 912-752-2430 912-825-5578 davis_mt@mercer.edu http://www.mercer.edu/tco	Doug Day Allyn & Bacon 1908-B Larchmont Drive Austin, TX 78704 800-455-2234 x8025 512-447-0911 Fax: 512-447-2489 dougdayab@aol.com	David Dayton Texas Tech 2810 24th St. Lubbock, TX 79410 806-796-1930 ddayton@ttu.edu
Priscilla Dorr Clovis Community College 417 Schepps Blvd. Clovis Community College Clovis, NM 88101 505-769-4911 dorrp@clovis.cc.nm.us	Donna Dowdney De Anza College 21250 Stevens Creek Blvd. De Anza College Cupertino, CA 95014 1150 Newell Road Palo Alto, CA 94303-2932 408-864-8991 415-321-2808 dowdney@admin.fhda.edu	Sam Dragga Texas Tech. University Dept. of English Texas Tech. University Lubbock, TX 79409-3091 4307 55th Street Lubbock, TX 79413 806-742-2521 806-797-0266 ditsd@ttacs.ttu.edu
David L. Dyrud Oregon Institute of Technology Communications Department Oregon Institute of Technology Klamath Falls, OR 97601-8801 2025 Leroy Klamath Falls, OR 97601-1861 503-885-1393 503-883-2365 dyrudd@oit.osshe.edu	Pamela S. Ecker Cincinnati State Technical & Community College 3520 Central Parkway Cincinnati State Technical & Community College Cincinnati, OH 45223-2690 513-569-1722 pamecker@aol.com	Susan Feinberg Illinois Institute of Technology Humanities Department 3301 S. Dearborn Illinois Institute of Technology Chicago, IL 60616 1917 N. Hudson Avenue. Chicago, IL 60614 312-567-3465 312-255-0498 feinberg@charlie.cns.iit.edu http://www.iit.edu/~tcid/ http://www.iit.edu/~feinberg

Anthony Flinn Eastern Washington University Department of English, MS #25 Eastern Washington University Cheney, WA 99004 511 E. 19th Ave. Spokane, WA 98203-2307 509-359-6863 509-747-0629 aflinn@ewu.edu	Timothy R. Fountaine California State University, Chico Dept. of English CSUC Chico, CA 95929 2060 Amanda Way #102 Chico, CA 95928 916-898-5796 916-893-2352 Tim_Fountaine@macgate.csuchico.edu	Alexander Friedlander Drexel University 9B/5044 32nd and Chestnut Drexel University Philadelphia, PA 19104 137 Henley Rd. Wynnewood, PA 19096-3535 215-895-1819 610-649-3990 friedlac@post.drexel.edu
Rebecca Fuller Technical Communication 976 Winterberry Drive Woodbury, MN 55125-9122 3M-OLS LDR EDUC P. O. Box 33225 St. Paul, MN 55133-3225 612-733-3096 612-739-9160 rafuller@mmm.com	Petra M. Gallert U.S. Air Force Academy HQ USAFA/DFENG Fairchild Hall U.S. Air Force Academy USAFA, CO 80840 6515 Delmonico, #17 Colorado Springs, CO 80919 719-599-0057 gallertpm.dfeug@usafa.af.mil	Sam C. Geonetta University of Cincinnati Department of Humanities 2220 Victory Parkway, ML 103 University of Cincinnati Cincinnati, OH 45206 3318 Meadow Green Ct. Amelia, OH 45102 513-556-6562 513-753-5449 geonetsc@uc.edu
Gwendolyn Gong The Chinese University of Hong Kong English Language Teaching Unit Li Dak Sum 101 Shatin, Hong Kong CHINA Tower 5, 7B Sui Wo Road Fo Tan, Hong Kong CHINA 852-2609-7466 852-2688-2515 ggong@cuhk.edu.hk	Patricia Goubil-Gambrell Texas Tech University MS 3091 Texas Tech University Lubbock, TX 79409-3091 3101 38th Street Lubbock, TX 79413-2709 806-742-2501 806-799-3857 gkpgg@ttacs.ttu.edu	Jeffrey T. Grabill 1453 -B- Willow Lake Dr. Atlanta, GA 30329 404-315-6151

Peter J. Hager James Madison University Institute of Technical and Scientific Communication James Madison University Harrisonburg, VA 22807 540-568-8018 hagerpj@jmu.edu http://www.jmu.edu/techscicom	June Chase Hankins Southwest Texas State University Dept. of English Southwest Texas State University San Marcos, TX 78666 317 North Bishop San Marcos, TX 78666 512-245-7680 512-396-1320 jh20@swt.edu	Craig J. Hansen Metropolitan State University Writing Department 700 E. 7th Street Metropolitan State University St. Paul, MN 55106 11015 Mayfield Ave. N. Stillwater, MN 55082 612-772-7752 612-430-2687 chansen@msus1.msus.edu
Hillary Hart University of Texas at Austin Dept. of Civil Engineering ECJ 8.214 University of Texas at Austin Austin, TX 78712 4409 Ramsey Ave. Austin, TX 78756 512-471-4635 512-453-2315 hart@mail.utexas.edu	James M. Henry George Mason University Department of English, MSN 3E4 4400 University Dr. George Madison University FairFax, VA 22030-4444 3 Cedarwood Ln. Lewes, DE 19958 703-993-2772 302-644-1441 jhenry@gmu.edu http://www.osf1.gmu.edu/~jhenry	Gina Hertel Alpha Technologies, Inc. 88 Centennial Ave. Alpha Technologies, Inc. Piscataway, NJ 08854 30 Appleton Rd. Glen Ridge, NJ 07028 908-980-1288, ext. 749 201-743-7976 ghertel@aplha88.com
Russel Hirst University of Tennessee Department of English 401 McClung Tower University of Tennessee Knoxville, TN 37996-0430 1717 Capistrano Drive Knoxville, TN 37922 423-974-5401 423-539-4765 Fax: 423-974-6926 rkh@utk.edu	Helen E. Hodgson Westminster College of SLC Department of Communication 1840 South 1300 East Westminster College of SLC Salt Lake City, UT 84105 1328 East Laird Ave. Salt Lake City, UT 84105 801-488-1691 801-581-0707 Fax: 801-484-5579 h-hodgso@wcslc.edu http://www.wcslc.edu/academic/grad/mpc/mpc.html http://www.wcslc.edu/pers_pages/h-hodgso/	Nancy Hoft Michigan Technological University 209 W. Douglas Ave. Houghton, MI 49931 906-482-5658 nhoft@world-ready.com http://www.world-ready.com/

Ann S. Jennings University of Houston - Downtown One Main St., Suite 1045 South University of Houston - Downtown Houston, TX 77002-1001 4200 Watson Unit 308 Houston, TX 77009-5061 713-221-8453 713-862-8312 jennings@dt.uh.edu	Robert R. Johnson Miami University (Ohio) Dept. of English Miami University Oxford, OH 45056 218 N. Campus Ave. Oxford, OH 45056 573-529-7340 573-523-7607 Fax: 573-529-1392 brjohns@miamiu.acs.muohio.edu	Johndan Johnson-Eilola Purdue University English Department Purdue University West Lafayette, IN 47907-1356 317-496-2373 317-567-2017 johndan@omni.cc.purdue.edu http://tempest.english.purdue.edu/pu http://tempest.english.purdue.edu
Michael L. Keene University of Tennessee, Knoxville Dept. of English University of Tennessee, Knoxville Knoxville, TN 37996-0430 5208 Daphne Drive Knoxville, TN 37914 423-974-6969 423-523-0651 mkeene@utk.edu	George E. Kennedy Washington State University Department of English Washington State University Pullman, WA 99164-5020 509-335-2331	M. Jimmie Killingsworth Texas A & M University Dept. of English TAMU College Station, TX 77843 2908 Aztec Ct. College Station, TX 77845 409-847-8550 409-695-0847 killingsworth@tamu.edu
Karla Saari Kitalong Michigan Tech University Department of Humanities 1400 Townsend Drive Michigan Tech University Houghton, MI 49931 1101 Ethel Avenue Hancock, MI 49930 906-487-3262 906-482-3656 kitalong@mtu.edu http://www.hu.mtu.edu/ http://www.hu.mtu.edu/~kitalong/	Maria C. Kreppel University of Cincinnati College of Applied Science University of Cincinnati Cincinnati, OH 45221-0103 3267 South Woods Ln. Cincinnati, OH 45213 513-556-4692 513-631-0616 maria.kreppel@uc.edu	Sook Fun Lim Nanyang Technological University MPE Nanyang Avenue Nanyang Technological University Singapore 2263 Malaysia 370 The Anchorage 03-13 Alexandra Rd. Singapore 159953 Malaysia 65-799-1328 65-474-1713 limsf@pacific.net.sg

Carol Lipson Syracuse University Writing Program, 239 HBC Syracuse University Syracuse, NY 13244-1160 8035 Shadow Rock Manlius, NY 13104-9728 315-443-1067 315-682-5755 cslipson@syr.edu http://wrt.syr.edu http://wrt.syr.edu/wrt/teachers/lipsonhp.html	Sherry Burgus Little San Diego State University Dept. of English & Comp. Literature San Diego State University San Diego, CA 92182-0295 2482 Valley Mill Rd. El Cajon, CA 92020 619-594-5238 619-448-1219 slittle@mail.sdsu.edu	Thomas L. Long Thomas Nelson Community College English Department Box 9407 Thomas Nelson Community College Hampton, VA 23670 804-825-3663 804-855-4925 longt@tncc.cc.va.us http://users.visi.net/~longt
Carl R. Lovitt Clemson University Pearce Center, 402 Strode Clemson University Clemson, SC 29634 214 Wren Street Clemson, SC 29631 864-656-5418 864-654-3867 lcarl@clemson.edu	William B. Macgregor Montana Tech of the University of Montana Dept. of Prof. & Tech. Communication 1300 W. Park St. Montana Tech of the University of Montana Butte, MT 59701 917 W. Broadway Butte, MT 59701 406-496-4423 406-782-3018 wmacgregor@po1.mtech.edu	Bruce Maylath The University of Memphis English Department P. O. Box 526176 The University of Memphis Memphis, TN 38152-6176 2240 Sargent Avenue St. Paul, MN 55105-1158 901-678-4490 612-699-8446 bmaylath@cc.memphis.edu
Carolyn R. Miller North Carolina State University Center for Communication in Science, Technology & Mgmt. Box 8105 Raleigh, NC 27695-8105 919-515-4126 crm@unity.ncsu.edu	Dennis Minor Louisiana Tech University English Department Louisiana Tech University Ruston, LA 71272 1102 Glenwood Ruston, LA 71270 318-257-3563 318-255-6045 dminor@vm.cc.latech.edu	Mohsen Mirshafiei California State University, Fullerton Dept. of English and Comparative Literature 800 N. State College Blvd. California State University, Fullerton Fullerton, CA 92364 425 E. Rockaway Drive Placentia, CA 92870 714-278-2632 714-278-3474 Fax: 714-278-5964 mmirshafiei@fullerton.edu

David H. Morgan P. O. Box 687 Civic Square ACT 2608 Australia 81 Lowanna St. Braddon ACT 2601 Australia +61-2-6249-7097	Margaret P. Morgan UNC-Charlotte Department of English UNC-Charlotte Charlotte, NC 28223-0001 9001 Nottoway Dr. Charlotte, NC 28213 704-547-4210 704-549-5728 mpmorgan@email.uncc.edu	Roger Munger University of Arkansas at Little Rock Department of Rhetoric and Writing 2801 S. University Little Rock, AR 72204-1099 4710 Sam Peck #1061 Little Rock, AR 72212 501-569-8337 501-221-1697 rhmunger@ualr.edu
Ed Nagelhout Stephen F. Austin State University P. O. Box 3007 - SFA Station Nacogdoches, TX 75961 409-468-2226 409-569-1241 enagelhout@stasu.edu	Nancy M. O'Rourke Utah State University Department of English Utah State University Logan, UT 84322-3200 P. O. Box 3833 Logan, UT 84323 801-797-3647 801-753-7755 norourke@cc.usu.edu http://www.usu.edu/~english/home.html	Sushil K. Oswal University of Hartford 200 Bloomfield Ave., #3927 West Hartford, CT 06117 860-242-7569 soswal@hartford.edu
Elizabeth R. Pass James Madison University Institute of Tech. & Scien. Comm. Wilson 313 James Madison University Harrisenburg, VA 22807 172-A Chestnut Ridge Drive Harrisenburg, VA 22801 540-568-8139 540-434-1200 passer@jmu.edu	Celia Patterson Pittsburg State University English Department Pittsburg State University Pittsburg, KS 66762 1015-A Ohio Pittsburg, KS 66762 316-235-4643 316-235-1466 cpatters@pittstate.edu	William Donald Payne Iowa State University English Department 203 Ross Hall Iowa State University Ames, IA 50011-1201 5021 Emerson Dr. Ames, IA 50014-7707 515-294-3584 515-292-6777 donpayne@iastate.edu http://www.engl.iastate.edu http://www.iastate.edu/~donpayne/

Angela Petit Univ. of Texas at El Paso Dept. of English Hudspeth 113 UTEP El Paso, TX 79968 5890 Bandolero Dr., #1047 El Paso, TX 79912 915-747-6245 915-845-5246 angpetit@utep.edu	William S. Pfeiffer Southern Polytechnic State University Humanities & Technical Communications Dept. 1100 S. Marietta Pkwy. Southern Polytechnic State University Marietta, GA 30060 1191 Valley Reserve Dr. Kennesaw, GA 30152 770-528-7206 770-424-1237 pfeiffer@spsu.edu	Nell Ann Pickett Hinds Community College Box 1266 HCC Hinds Community College Raymond, MS 39154-9799 601-857-3361 601-857-5165 Fax: 601-857-3591 Fax: 601-857-3648 picketthcc@aol.com
James E. Porter Purdue University Department of English Heavilon Hall Purdue University West Lafayette, IN 47906 112 Black Hawk West Lafayette, IN 47906 765-494-3734 765-497-2238 jporter@omni.cc.purdue.edu	Pete Praetorius Michigan Tech 444 White St. Hancock, MI 49930 906-482-5378 pwpraeto@mtu.edu	Kenneth R. Price Southwest Missouri State University 901 South National Avenue Southwest Missouri State University Springfield, MO 65804-0095 2612 South Glenview Ave. Springfield, MO 65804 417-836-5167 417-889-0584 krp626f@wpgate.smsu.edu
Kenneth T. Rainey Southern Polytechnic State U. Dept. of Humanities & Tech. Comm. 1100 S. Marietta Pkwy. Southern Polytechnic State U. Marietta, GA 30060 1194 Robert Ln. Marietta, GA 30062 770-528-7209 770-971-6157 krainey@spsu.edu	Diana Reep University of Akron Department of English University of Akron Akron, OH 44325-1906 750 Mull #3A Akron, OH 44313 330-972-7470 330-864-6113 dreep@uakron.edu	Louise Rehling San Francisco State University Technical & Prof. Writing Program 1600 Holloway Ave. San Francisco State University San Francisco, CA 94132 320 Bowfin St. Foster City, CA 94404-1821 415-338-7025 Fax: 415-338-6080 FAX: 415-570-5090 rehlingl@sfsu.edu http://www.sfsu.edu/~tpw

Dan Riordan University of Wisconsin - Stout 141 Harvey Hall University of Wisconsin - Stout Menomonie, WI 54751 1215 Wilson Ave. Menomonie, WI 54751 715-232-1344 715-235-7002 driordan@uwstout.edu	Deborah Rosenquist Dell Computer Corporation 2214 W. Braker Lane, Suite D Austin, TX 78758-4063 9700 Bordeaux Ln. Austin, TX 78750 512-728-8574 512-258-4618 deborah_rosenquist@ccmail.us.dell.com http://www.dell.com	Carolyn Rude Texas Tech University Department of English, MS 3091 Texas Tech University Lubbock, TX 79409-3091 3120 21st Street Lubbock, TX 79410-1428 806-742-2517 806-793-3542 rude@ttu.edu http://english.ttu.edu/tc
Donald Samson Radford University English Dept. - 6935 Radford University Radford, VA 24142 5317 Curry Ford, M201 Orlando, FL 32812 540-831-5284 540-633-0506 Florida Home: 407-282-8487 dsamson@runet.edu http://www.runet.edu/~engl-web/ http://www.runet.edu/~dsamson	Dave Samuelson California State Univ. - Long Beach Department of English 1250 Bellflower Blvd. California State Univ. - Long Beach Long Beach, CA 98040-2403 1 Pepper Court Coto de Caza, CA 92679 562-985-4245 714-858-7878 Fax: 310-985-2369 dnsmlsn@csulb.edu	Karen Rossi Schnakenberg Carnegie Mellon University Department of English 5000 Forbes Avenue Carnegie Mellon University Pittsburgh, PA 15213 7011 Reynolds Street Pittsburgh, PA 15208-2836 412-268-2659 412-731-3046 krs@andrew.cmu.edu
Karen A. Schriver KSA, Document Design & Research 33 Potomac Street Oakmont, PA 15139 412-828-8791 412-828-7065 Fax: 412-828-7247 ks0e+@andrew.cmu.edu	Stuart Selber Texas Tech University Technical Communication & Rhetoric Pgm. Department of English Texas Tech University Lubbock, TX 79409 selber@ttu.edu http://english.ttu.edu	Cynthia L. Selfe Michigan Tech University Humanities Department 1400 Townsend Drive Michigan Tech University Houghton, MI 49930 RR #1, Box 104-D Hancock, MI 49930 906-487-2447 906-482-5663 cyselfe@mtu.edu http://www.hu.mtu.edu http://www.hu.mtu.edu/~cyselfe/

Jack Selzer Penn State University Department of English Burrowes Building Penn State University University Park, PA 16802 720 Teaberry Lane State College, PA 16803 814-865-0251 814-234-2935 jls25@psu.edu	Henrietta Nickels Shirk University of North Texas Department of English P. O. Box 13827 University of North Texas Denton, TX 76203-6827 P. O. Box 8503 Denton, TX 76203-3503 817-565-2188 817-440-9333 hnshirk@unt.edu	Elizabeth Overman Smith Auburn University 9030 Haley Center Auburn University Auburn, AL 36849-5203 124 Kimberly Drive Auburn, AL 36832 334-844-9071 334-847-6355 smitheo@mail.auburn.edu
Herb J. Smith Southern Polytechnic State University 1100 S. Marietta Pkwy. Humanities & Technical Communication Dept. Southern Polytechnic State University Marietta, GA 30060 991 Arbor Forest Way Marietta, GA 30064-3681 770-423-7475 770-423-7209 hsmith@spsu.edu	Katherine Staples Austin Community College- Northridge 508 Park Blvd. Austin, TX 78751 Austin Community College- Northridge Technical Communication Dept. 11928 Stonehollow Drive Austin, TX 78758 512-223-4831 kstaples@bga.com	Stephen J. Stedman Tennessee Technological University Department of English Box 5053 Tennessee Technological University Cookeville, TN 38505 2675 Lakeland Drive Cookeville, TN 38506 615-372-3763 615-528-3820 sjs8081@tntech.edu
Susan A. Stevenson Simon Fraser University School of Engineering Simon Fraser University Burnaby, BC CANADA V5A 1S6 1997 E. 4th Avenue Vancouver, BC CANADA V5N 1K3 604-291-3816 604-251-1759 stevenso@sfu.ca	James F. Stratman University of Colorado at Denver Plaza Building, Suite 102-B University of Colorado at Denver Denver, CO 80217 1150 Galapago St., #712 Denver, CO 80204 303-556-2884 303-571-9004 jstratman@carbon.cudenver.edu	Dale L. Sullivan Michigan Technological University Humanities Dept. Houghton, MI 49931 313 S. Ottawa St., Box 15 Earlville, IL 60518 906-487-3256 815-246-9839 dsulliva@mtu.edu

Kris Sutliff Southwest Missouri State University English Department 901 S. National Southwest Missouri State University Springfield, MO 65804 1306 E.Compton Springfield, MO 65804 417-836-5107 417-887-9020 kss172f@wpgate.smsu.edu	Jeffrey Todd Texas A & M University English Dept. TAMU College Station, TX 77843 1700 Southwest Pkwy., Apt. 128 College Station, TX 77840-4991 409-845-3451 409-693-1128 jat6677@acs.tamu.edu	Janice Tovey East Carolina University Department of English East Carolina University Greenville, NC 27858 Rt. 8 Box 757 Greenville, NC 27834 919-328-1544 919-355-5653 toveyj@mail.ecu.edu
Elizabeth R. Turpin Ferris State University 19418 Golfview Drive Big Rapids, MI 49307-9447 Dept. of Languages & Literature A-C 101 Ferris State University Big Rapids, MI 49307 616-796-7672 616-592-2914 Fax: 616-592-5982 or 2610 eturpin@art01.ferris.edu	Jan M. Ulijn Eindhoven University of Technology Den Dolech 2, Postbus 513 Eindhoven University of Technology 5600 MB Eindhoven The Netherlands Buizerdlaan 2 5672-VS Nuenen The Netherlands Netherlands: 31-40-247-4569 Netherlands: 31-40-283-3169 Fax: 31-40-246-8054 j.m.ulijn@tm.tue.nl	Lili F. Velez 334 W. Duval St., 2nd FLR. Philadelphia, PA 19144
Craig Waddell Michigan Tech University Dept. of Humanities, Walker 314 1400 Townsend Drive Michigan Tech University Houghton, MI 49931-1295 906-487-3261 906-482-1636 cwaddell@mtu.edu	Thomas L. Warren Oklahoma State University English Department, Morrill 205 Oklahoma State University Stillwater, OK 74078-4069 920 W. Cantwell Stillwater, OK 74075 405-744-9470 405-624-3025 twarren@vm1.ucc.okstate.edu http://okstate.edu/artsci/techwr	Merrill Whitburn Rensselaer Polytechnic Institute Dept. of Language, Literature, & Communication Rensselaer Polytechnic Institute Troy, NY 12180-3590 11 North Hill Road Ballston Lake, NY 12019-1312 518-276-6569 518-877-5310 whitbm@rpi.edu

Carole Yee New Mexico Tech Humanities Department New Mexico Tech Socorro, NM 87801 518 School of Mines Road Socorro, NM 87801 505-835-5323 505-835-3765 cyee@nmt.edu http://www.cramer.nmt.edu http://www.cramer.nmt.edu/~cyee	Art Young Clemson University English Department Box 341503 Clemson University Clemson, SC 29634-1503 106 Monaco Circle Clemson, SC 29631 864-656-3062 864-653-3208 apyoung@clemson.edu	James P. Zappen Rensselaer Polytechnic Institute Dept. of Language, Literature, & Communication Rensselaer Polytechnic Institute Troy, NY 12180-3590 9 Tamarack Lane Clifton Park, NY 12065 518-276-8117 518-383-3749 Fax: 518-276-4092 zappenj@rpi.edu http://www.rpi.edu/~zappenj/PhDprogram/phdprogram.html http://www.rpi.edu/~zappenj
Donald E. Zimmerman Colorado State University Center for Research on Writing & Comm. Tech. C-225 Clark Building Colorado State University Fort Collins, CO 80523-1785 970-491-5674 Fax: 970-491-2908 dzimmerman@vines.colostate.edu		

Appendix E:
Previously Published CPTSC Documents

The Tables of Contents of previous CPTSC *Proceedings*, CPTSC Program Review Application and Guidelines for Self-Study to Precede CPTSC Visit, and The Constitution of the CPTSC were last published in the 1995 *Proceedings* of the 22nd Annual meeting. These documents are also available on line via the World Wide Web at http://www.hu.mtu.edu/cptsc/.